Vos idées vous appartiennent
Nous vous aidons à les protéger

Brevets
Marques
Designs
Veille technologique
Dear graduates,

As you know, 2016 will be the last year that I will serve EPFL as President. The Federal Council appointed Professor Martin Vetterli as the new President in February following the recommendation of the ETH Board, and he will assume his new role in January 2017. His proven qualities and experience will undoubtedly underpin the future legacy of our school. This year is an exciting challenge for me, personally, as I endeavour to pass an increasingly more dynamic school to my successor whilst ensuring a smooth transition in leadership.

Another headline for EPFL this year is the inauguration of the ArtLab building situated under the Esplanade. With its magnificent pavilions dedicated to major EPFL research projects, museum exhibitions and the Montreux Jazz Festival archives, the ArtLab building will represent a true convergence between science, technology, art and society. We are pleased to invite you, as alumni, to the opening on November 4th as part of the EPFL Alumni Gala.

Patrick Aebischer, Président de l’EPFL
Dear alumni,

The start of 2016 brings a breath of fresh air and new developments for the alumni network. The first of these new developments can be found in your pocket, with the all new version of the PocketCampus application. Thanks to this app, you can now use your smartphone to stay connected with other alumni, update your contact information and register for events happening near you.

Another development includes the launch of several alumni clubs over the next few months. The first of these clubs is dedicated to EPFL’s female engineers, who comprise roughly only a quarter of our alumni. Our aim is to identify and implement solutions that will showcase the careers of our female alumni better.

For the first time this year, EPFL Alumni also organised EPFL’s participation in a major sporting event, the Lausanne 20km. In April, more than 500 runners (alumni, students and staff) wore EPFL’s colours and participated together in this fun, sporting event. We hope that the success of this event will encourage others amongst you to participate in sporting events, as EPFL alumni, both in Switzerland and abroad.

Finally, don’t forget to register for the first Alumni Gala, which will be held on November 4th. It is sure to be an evening full of reunions and incredible surprises. We would be delighted if you could join us for this exceptional event.

We hope that you are as enthusiastic about these developments as we are and that this magazine helps you to discover afresh the wide variety of careers and individual stories of our alumni.

Enjoy!

Annelies Garcia,
head of EPFL Alumni

---

Diving in the Arctic with Ghislain Bardout

Since graduating with a Mechanical Engineering degree in 2009, explorer Ghislain Bardout has been studying marine life under the pack ice of the Arctic in his Under the Pole expeditions.

Physics Class of 1995: Life After EPFL

Five graduates share memories of campus life and discuss the trajectories their lives have taken since.
REPORT: NEW BEHAVIOURS
The digital takeover and technological advances in finance, mobility, occupational health are disrupting every aspect of society and changing our habits.

FUTURE PRESIDENT OF EPFL
Portrait of Martin Vetterli, who will take on the duties of school president in January 2017.

GRADUATES AT FISCHER CONNECTORS
Recognised worldwide for its innovation in connector technology, the Vaud-based company Fischer Connectors counts a number of graduates and former employees of EPFL.

AN ALUMNUS DRIVEN BY PASSION
Roland Loos (EL’87) plays an active role in a number of projects at EPFL, ranging from research and MOOCs to support for start-ups.

FUTURE PRESIDENT OF EPFL
Portrait of Martin Vetterli, who will take on the duties of school president in January 2017.
Seed Night for EPFL Alumni took place on April 21st, 2016 at EPFL’s Rolex Learning Center. Fifteen very promising startups from both the university and the Canton of Vaud gathered at the event, which drew a total of 250 participants including business angels, industry executives and alumni. It was a huge success and a lovely evening reception for up and coming innovators. For photos and more information, visit the EPFL Alumni website.
IN A CITY NEAR YOU ...

ECAL LAB VISIT
MARCH 26TH, 2016
The EPFL+ECAL Lab is a laboratory located in the ECAL (University of Art and Design Lausanne) building, belonging to EPFL. Its aim is to explore the potential of emerging technologies through design—in other words, to transform scientific performance into user experience. Alumni had the opportunity to visit the Lab on March 26th, 2016.

MARTIN VETTERLI IN ASIA
MARCH 24TH AND 25TH, 2016
While he was in Asia for the International Conference on Acoustics, Speech and Signal Processing (ICASSP), Martin Vetterli met with alumni living locally. It was the perfect opportunity to spend some time with graduates living in Shanghai and Singapore on March 24th and 25th, respectively.

PHONAK VISIT
DECEMBER 8TH, 2015
Remember the 2003 America’s Cup? Wireless communication systems equipped with innovative technology designed by Phonak (part of the Sonova Group) played a crucial role in Alinghi’s victory. Phonak, a company which develops, manufactures and distributes cutting edge hearing care solutions around the world, has been working with wireless technology for over 60 years. Forty alumni from the Suisse Orientale association had the opportunity to visit this company’s head office in Stäfa, Switzerland, in late 2015.
An EPFL graduate deep under the Arctic ice

Ghislain Bardout (GM’09) has been leading exploration missions since 2010 to study marine life under the Arctic ice as part of his Under The Pole project.

Everyone has seen images of the vast, frozen stretches of the Arctic Circle, but no one really knew what went on under those huge packs of ice. Until now. Ghislain Bardout has been studying this mysterious world since he graduated from EPFL in 2009, bringing back spectacular images that are also of great value for scientists.

Ghislain got into his life of adventure one step at a time. He developed a strong bond with nature starting in his early childhood, growing up on the shores of Lake Geneva and going on numerous dives in the lake. At age 25, he met the explorer Jean-Louis Etienne. While at EPFL, Ghislain Bardout took a two-year break from his studies to take part in the project Total Pole Airship, a scientific mission to explore the Arctic pack ice in a blimp. The expedition was interrupted in early 2008 due to an accident, but it was his first step towards studying the ice. He returned from this expedition driven by one goal: to go back.

He settled in Lausanne and earned his degree in Mechanical Engineering while developing the project that would be his first experience as an expedition leader, Under The Pole. The first six-month stage involved a feasibility study, which he prepared alone. An important milestone was reached in March 2008 when Rolex took interest in the project. Four months later, they struck a deal, and the Swiss watchmaker became the first major sponsor. This gave the project the credibility it needed to get Under The Pole off the ground. “Preparing an expedition of this size and scope means
jumping over a series of hurdles, a bit like in a new business project," says Ghislain Bardout. "The deal with the first sponsor is a turning point."

The expedition began on March 26th, 2010, after extensive training. Ghislain Bardout initiated the project on his own but was joined by seven experts to form a multi-talented team including a photographer, nurse and mechanic, who were all prepared and motivated to explore the pack ice. Fifty-one dives were carried out, producing never-before-seen images. After they returned from the expedition, the project lived on across different media to share with the world all the wonders the team had discovered. The story was covered by the French television show Thalassa and the international National Geographic Channel, in a book, in various articles and through educational programmes set up with the French Ministry of National Education. This media coverage offered the general public a kaleidoscope of underwater life at the North Pole.

Not about to stop after this initial success, Ghislain Bardout and his team began working on a new expedition, Under The Pole II. Unlike the first mission, which lasted 45 days, this new project launched in January 2014 was of an entirely different magnitude. The 21-month adventure planned 300 dives for a more thorough look at marine life and humans’ resistance to such extreme conditions, including a study of divers’ physiology in a glacial environment. Under The Pole II also featured a more personal element. Bardout’s wife Emmanuelle had already accompanied the first expedition, but this time around, their son Robin, age two at the time of departure, became a crew member. This expedition witnessed first hand the devastating effects of climate change by studying the pack ice and how much of it was melting. The team observed how these changes have forced the Inuits to adjust their daily lives, such as their fishing and hunting methods.

Ghislain Bardout’s engineering studies at EPFL not only brought him valuable technical expertise but also taught him key skills to endure large amounts of work and withstand pressure. It was in fact his background in engineering that initially appealed to Jean-Louis Etienne and helped launch his career as an explorer.

Today, Ghislain Bardout and his wife are developing a third Under The Pole expedition and have set a provisional timetable and roadmap for the mission. They are working closely with the project’s institutional and private partners to prepare for it. Meanwhile, he is laying the groundwork to take this third expedition to new depths. He wants to design a revolutionary ocean research submarine that can be used for long, extremely deep sea dives. The project is only in its early stages and will require four to five years of development. But it is perfectly in line with the explorer’s philosophy, which he sums up in four words: innovation, work, passion and perseverance.
EPFL shows its true colours in this year’s “20km de Lausanne” race

On April 24th, a university team with over 500 runners participated for the first time in the most famous of the Canton of Vaud’s foot races.

It was not a lazy Sunday for EPFL. For the very first time, runners of the team sporting the university’s apparel took their marks at the starting line of the “20km de Lausanne” race, and what a team they were! With a total of 513 runners—154 of which were alumni—the university’s running squads were one of the most numerous team, both for the 20km and 10km events.

Graduates, current students and staff members all came together in good cheer to take part in this sporting event, before winding down post-race during a buffet organised by EPFL Alumni at the university’s stand. We offer our sincerest congratulations to these talented athletes (whose stride was not broken by the erratic weather) and we are thrilled to see that many more are already interested in the 2017 race.

As for those who could not attend but who nonetheless wish to show their school pride around the world, a brand new EPFL clothing store will soon be available online! More information coming soon.
Pocket Campus: a new application for alumni

Alumni can now update their contact information, view the directory and follow all EPFL activities from their smartphones.

EPFL with you wherever you go: PocketCampus offers alumni the ability to follow EPFL wherever you are. Previously targeted at student life on campus, this app is now also available for alumni and will help you keep up-to-date with fellow alumni and follow all the latest news from EPFL. The app makes it easier to use the directory, discover upcoming events that are happening near you and update your contact information whenever you want, from wherever you are. With its simple and intuitive design, the app will help future graduates already using it on campus to transition from student to alumni.

Q&A WITH LOIC GARDIOL (COMPUTER SCIENCE, CLASS OF 2012) AND AMER CHAMSSEDDINE (COMPUTER SCIENCE, CLASS OF 2013), CO-FOUNDERS AND DIRECTORS OF POCKETCAMPUS.

What are the advantages of this app for alumni?
The app enables alumni to access the wide EPFL Alumni network directly from their smartphones. They can search for classmates in the directory, find out about upcoming alumni events, update their profiles and even learn about special offers for alumni contributors. And all this is available directly through the app.

Why have Alumni services been integrated into PocketCampus, rather than developing a separate app?
The app is intended for current alumni but also future graduates of EPFL. The PocketCampus app is already very popular amongst students, so it was an obvious step to add an EPFL Alumni section. Future alumni will continue to use the app that they are already familiar with and existing alumni can download it easily from the App Store (iOS) or Play Store (Android) by searching for “EPFL”. To access the Alumni services, just click on “EPFL Alumni” in the main menu.

You might also be wondering why we did not integrate geolocation into the app.
Even though it would have been nice to be able to find alumni in real time in Singapore or Paris, for example, this would mean that everybody would need to have geolocation turned on permanently on their phones. This would have a detrimental effect on the autonomy of a smartphone and would raise questions about privacy.
The directory is already a good tool to help locate alumni as it gives the city or place of residence of each person!

Will there be more developments to the app over the next few months?
This is only the first version! For future versions, we would like to add a feature enabling users to filter their searches, by year or degree, for example, or even by name and company. This will also mean that we can add a “My class” button, which will display everyone who graduated in the same year you did. We are also planning a new design for the Android version and for certain functions on iOS, particularly for the events and international chapters sections.

If you have any feedback or suggestions, please don’t hesitate to contact alumni@epfl.ch
Alumni at Fischer Connectors

Fischer Connectors, the international company reputed for its innovation in connector technology, employs a number of graduates and former employees from EPFL. Here, they discuss their jobs and describe their organisation as one of the most modern companies on the northern shore of Lake Geneva.

Founded in 1954 in Morges and based in Saint-Prex for the past ten years, Fischer Connectors is a pure product of the Canton of Vaud. But that does not mean the company has not developed beyond Swiss borders. With customers around the world and eight subsidiaries in Europe, Asia and the United States, Fischer Connectors is a leading manufacturer of rugged push-pull circular connectors and cable solutions.

The group owes its success to continuous improvement and innovation. Its innovative approach is reflected both in its product range, which includes more than 30,000 catalogue items, and its continuous optimisation of all company processes. “For me, the watchword is anticipation,” says Dominique Glauser, CEO of Fischer Connectors. “By making this a fundamental element of our corporate culture, we can meet technological challenges and remain competitive.”

Located less than 15 kilometres from EPFL, Fischer Connectors employs a number of the school’s alumni and former employees. Four of them met with us to talk about what they do at the company and how this mindset is reflected on a daily basis.

Dominique Glauser has been CEO of Fischer Connectors since 2004. He established a culture of excellence as soon as he arrived. “The company philosophy focuses on customers’ needs and on constantly measuring our performance to meet those needs under any circumstances,” Dominique Glauser says. Lean manufacturing – a management approach that aims to continuously increase efficiency and rationalise operations – applies at all levels of the company, including production units of course, but also in handling orders, sales and case monitoring right up to customer delivery. Everything is done to reduce inventories, waste and time frames to the absolute minimum. One of the latest developments at Fischer Connectors is the Product Selector. Sales teams can use this iPad application to browse the catalogue and choose the best suited product directly with the customer, for example at an exhibition or a sales visit, or send an offer during the discussion.

“When we go forward with a decision, it’s obviously tempting to hope for immediate results,” Dominique Glauser says. “But we have to remember that it can take time before the effects of a change in our work methods produce any measurable results.” This approach is how Fischer Connectors has become a leader on a highly competitive market and withstood external factors, such as when the Swiss National Bank unpegged the Swiss franc from the euro in 2015.
Stéphane Rohrbach has been at Fischer Connectors for 11 years. He first managed the project to introduce lean manufacturing processes then went on to oversee the operations department followed by the engineering department. Innovation is what his job is about. “One of our missions is to identify which innovations apply best to Fischer Connectors, bearing in mind that the best ones are those that come most naturally,” he says. “That means the innovations that derive directly from the areas of improvement that we have identified and from a thorough understanding of our customers’ changing needs.”

After starting his career in technical positions and project management, today he is most passionate about his role as a manager. “Being responsible for a team of 25 people means being responsible for each of the projects led by that team. I find that managerial aspect extremely motivating and the most exciting part of my job,” he says. Analytical skills and the ability to tackle challenges from new angles, qualities developed as a student at EPFL, are essential to his day-to-day work. “Studying microengineering is also very useful for this type of job as it covers a broad spectrum of expertise,” he adds.
The main challenge is to deliver orders as quickly as possible after the order is placed. But that’s where the company excels, due to its automated processes. From order placement to supplier relations to transport, delivery times have been cut in half over the past six years while reducing inventories. Optimising delivery times reflects an outstanding ability to adapt.

Amir Farhoumand developed this adaptability at EPFL, where both his education and involvement in campus life served as a testing ground. While working with AGEPoly, the EPFL students’ association, he had the opportunity to deal with different kinds of people, from fellow students to School administration. That is where he also had his first experience managing a budget. These days, he faces a variety of daily challenges but benefits from the resources he needs to bring an appropriate response. And that’s what makes his job so exciting. To close, he says, “In my eight years at Fischer Connectors, I’ve never experienced two weeks that were exactly the same.”
Jean-Marie Buchilly heads the department that develops new products. He steers R&D, concept validation and product optimisation, in line with requirements from the marketing department, to release the company’s new connectivity solutions on the market. His responsibilities also include actively following the latest technological developments. This market watch means following the specialised press and exhibitions and monitoring major trends in technology that step beyond the boundaries of connectors.

As a microengineering graduate fascinated with new technology, he finds this aspect of his work captivating.

Products are increasingly developed by working closely with the marketing department. This brings a better understanding of what’s really happening on the market. This teamwork has resulted in a new approach to launching products. They are revealed earlier in their development to make sure they are relevant to market demands and to identify potential areas of improvement.

Jean-Marie Buchilly was also instilled with the drive to achieve excellence at EPFL, having to deal with a large amount of work and diverse projects to manage. “Trainee programmes were also key periods,” he says. “An immersion into company operations is a valuable experience for any student.”

“Trainee programmes were key periods during my studies at EPFL”
 Finance your continuing education through the ACUBE Foundation

The Acube Foundation offers alumni the unique opportunity to continue their professional training. Although relatively unknown to the alumni community, the foundation grants interest-free loans of 5,000 to 20,000 Swiss francs to graduates who want to continue their training and gain additional professional experience. This financial assistance supports graduates in three ways. They can study a scientific field more in-depth, pursue non-academic post-graduate research in Switzerland or abroad or take management courses. Two alumni share their experience.

"ACUBE’S CONTRIBUTION WAS CRUCIAL TO MY MBA PROJECT"

"Four years after graduating from EPFL, I wanted to add a financial dimension to my technical background and bring it to the executive level. The MBA program offered exactly that, and Columbia Business School was a great opportunity to live in New York City. However, in addition to the tuition fees, I was going to live in one of the most expensive cities with no income for 2 years. I decided to apply for an Acube educational loan, which the foundation thankfully agreed to provide.

CBS’s MBA program offers a diverse choice of classes. The first year curriculum is partially imposed, while the second year is flexible. I focused my class choices on Energy and Finance. After graduation, I joined Deutsche Bank’s Infrastructure & Energy group. I had never experienced the banking environment before and the shock was substantial: I was entering a world attached to hierarchy, and soon had to navigate delicate situations related to confidentiality and conflicts of interests.

While the learning experience on Wall Street was intense, I realized that I needed an environment that valued my engineering background to a greater extent and decided to join GE Energy Financial Services’s rotation program. The program allows to work in 3 different teams over 3 years, thereby offering a diversified experience across the various disciplines of energy infrastructure investments.

The last 8 years have been intense on both the professional and the personal fronts. I have been initiated to various new notions of business and the world of finance. Acube’s contribution was crucial to my MBA project, and I will remain extremely thankful for its support."

"I STUDIED ABROAD FOR A YEAR THANKS TO THE SUPPORT OF THE ACUBE FOUNDATION"

"When I was accepted to do a Masters in Economics and Policy of Energy and the Environment at the University College London (UCL), I realised that it would be expensive. Despite some personal funding, I have to thank the Acube Foundation for its financial aid, rapid response and enthusiastic support. Without the foundation, I wouldn’t have been able to study abroad.

I found the approach to teaching in the English-speaking world fascinating. They focus more on debates and group work, meaning that students have to develop soft skills. In interviews, you notice that recruiters are as interested in technical knowledge as they are in relational skills.

Although it is one of the top universities in the world, UCL has less of an international reputation than Cambridge or Oxford. But I would recommend the education they provide to any EPFL graduate who wants to take their training as an engineer further. I hope that other alumni will be able to benefit from the financial aid offered by the Acube Foundation in the future!"

Information and requests at www.epflalumni.ch/loans/
Driven by passion, from satellites to EPFL research projects

After running one of Switzerland’s leading satellite telecommunications companies for more than 10 years, Roland Loos (EL’87) now devotes his time to a number of projects at EPFL. His involvement in research, start-ups and massive open online courses reveals his passion and dedication to a wide range of interests. Profile.

Text: Arnaud Aubelle

As a child, Roland Loos was fascinated with outer space. It’s only logical that this Luxembourg native became interested in satellite communications. A few years after graduating from EPFL, he began working for the satellite ground station located in Leuk in the Canton of Valais and operated by Swiss PTT, which later became Swisscom. Taking this experience to the next level, in the early 2000s he founded his own company, NewSat Communications, which provides businesses with satellite telecommunications solutions. His clients include large oil and gas groups, most of which are located outside Switzerland, primarily in Africa. “I travelled to Africa one week a month on average,” Loos says. “That’s how I developed a local network there.”

NewSat Communications has been an immense success, to the point that it attracted the attention of American groups. In 2013, it merged with ITC Global, which provides similar solutions in the mining sector. The synergy between the two companies was unquestionable. The company was eventually sold to Panasonic Avionics Corporation in 2015. After running the company for nearly ten years, Loos stepped down once the acquisition was complete.

Throughout his professional career, Roland Loos has closely followed the development of EPFL. “I admire how the school has developed, boosting its international profile, extending its range of research fields, improving campus life and increasing the number of students.” But he really reconnected with EPFL after leaving NewSat Communications. He made use of his additional free time to look at the school’s spin-offs after reading an Alumnist article in June 2015 about investing and supporting innovation. He picked out several start-ups that caught his interest, began talking with the Vice-Presidency for Innovation and Technology Transfer and ended up investing in three of them: Swissto12, which designs components for telecommunications systems, Else, which specialises in nanosatellites for M2M (machine-to-machine) communication, and Stérilux, which develops a sterilisation system that can be used in certain African countries. All three start-ups are related to his areas of expertise or interest. “I wanted to go beyond a mere financial investment and play an active role in developing the strategy of these companies as a member of the Board of Directors.”

His involvement in the MOOCs Africa programme to develop massive open online course in Africa is another story. He has taken advantage of his network of contacts and devoted personal time to the project. The programme has three main objectives: 1) define course content that is relevant for professional training, 2) train local teachers in technology and MOOC teaching methods and 3) develop greater Internet access for students, who are often forced to use the 3G network off campus if they want to go online. This last objective is where Roland Loos is focusing his efforts. He has travelled personally to Côte d’Ivoire, the project’s pilot country, to negotiate directly with local operators and set attractive subscription rates for MOOC students. The negotiations are in progress, and if successful, the goal is to...
strike the same type of deal in Cameroon and other West African countries. Roland Loos is also financing a PhD student at the Courtine laboratory for two years. The personality and expertise of Professor Courtine inspired him to make this donation, but he also takes a personal interest in advances in neurorehabilitation, as his son, a first-year student in Life Sciences, is paraplegic. He has been closely monitoring their advances while at the same time making sure that the scientists enjoy full freedom to conduct their research. With his wide range of interests and expertise, he has also worked on broadcasting the take-offs, landings and press conferences of Solar Impulse and enthusiastically follows the programmes underway at the Swiss Space Center.

When asked why he is involved personally and financially in so many ventures, Roland Loos points to his motivation to see projects advance and pursue his passion for aerospace while broadening the spectrum of his activities. “My decisions were made as much with my head as with my gut feeling,” he says. That’s not hard to believe coming from this alum, driven by curiosity and passion, with his gaze forever set on the stars.
EPFL Alumni creates a club for women

What does the workday look like for a young, female mechanical engineer surrounded by 38 male colleagues? EPFL Alumni brought together 20 graduate volunteers to establish an EPFL Alumni Women Club in order to answer that very question and, most importantly, to help bridge the gender gap.

Whether they graduated in physics, mechanical engineering, or life sciences, and whether it was in 1985, 2000 or 2015, our female graduates come to the same conclusion—there are too few women in engineering, and even fewer in upper management positions.

The percentage of female students has certainly risen over the past 40 years, going from 8% in 1975 to 27.7% in 2015. What’s more, these female students have a slightly higher success rate than their male counterparts, as 28% of graduates are women. When these female graduates join the working world, however, the gender gap widens.

EPFL is getting involved to make sure that female graduates with top-notch training continue working and have the opportunity to advance their careers and projects. Two initial meetings took place over March and April 2016 in which possible measures for action were quickly outlined with the traditional, pragmatic spirit shared by all EPFL alumni.

Five concrete measures came about:

- Start a mentoring programme between senior alumni (men and women) and young female graduates entering the work force
- Help women professionally by offering them continuing education, particularly in soft skills
- Encourage female entrepreneurship with a coaching system and by promoting female-created start-ups at Seed Night, the annual EPFL Alumni event dedicated to innovation
- Give female engineers and architects a positive image by providing the opportunity for them to come and present their career paths in primary and secondary school classrooms
- Invite alumni in management positions to actively promote career advancement for women in their companies

The challenge for women at EPFL and in the working world is by no means new, nor are the initiatives set forth to address it. This, of course, is why the EPFL Alumni Women Club aims to join forces with the EPFL Equal Opportunities Office, the Swiss Association of Women Engineers (SVIN—primarily active in German-speaking Switzerland) and the WISH Foundation, which is already active on the EPFL campus, to tangibly realise the aforementioned goals.

A schedule for implementing these measures is being drafted and will be diffused shortly. In addition, we are looking for alumni in management positions to share and present any measures taken within their companies to promote women in the workplace. Please feel free to contact us at annelies.garcia@epfl.ch.
These four alumni with very different profiles demonstrate how studying materials at EPFL can lead to eclectic careers. They discuss their education and their memories from being on campus.

After doing my Bachelor’s and Master’s degree in engineering at the University of Kyoto, I worked for Sumitomo Metal Industries as an engineer. I was then transferred to Switzerland in 1977 and took advantage of the opportunity to do my PhD at EPFL. As soon as I started, I got involved in research with Professor Wilfried Kurz, a specialist in solidification. By combining the most modern theories with my factory experience, we clarified the phenomenon of solidifying molten steel using continuous casting. That probably contributed to raising that technology to the highest global scale. Today, I use these expertise as an advisor to the Japanese steel producer Nippon Steel.

The broad range of nationalities made EPFL’s campus life exciting. In the laboratory where I worked, there were as many students and researchers from Switzerland as from other countries. I still remember long discussions on very intellectually stimulating subjects.”

When I finished my PhD, I joined the American chemical group DuPont and had the opportunity to work in several countries in North America and Europe. I was involved in a wide range of fields, including research, marketing and business management. I currently work as director of research and innovation at Solvay, the world’s leading chemical company.

The network that I began developing during my eight years at EPFL is very useful to me today, and that is mainly due to the school’s international scope. As a student, I learned how to work in a group and complete projects with strict time constraints. Those are key skills for a career in industry.

The school was very different in the 1980s. But the passion of those who study and work there hasn’t changed. That energy is the best measure of its success and the potential it generates.”
“MY EDUCATION AT EPFL TAUGHT ME HOW TO SOLVE COMPLEX PROBLEMS AND GAVE ME SELF-CONFIDENCE. ASKING QUESTIONS OR NOT UNDERSTANDING STRAIGHT AWAY IS NOT ADMITTING WEAKNESS, EVEN WHEN YOU’RE IN A POSITION OF RESPONSIBILITY. ON THE CONTRARY, IT HELPS YOU BETTER UNDERSTAND EACH INDIVIDUAL PROBLEM.”

JOHAN PFEIFFER, 1989
Executive Vice President at Tyco, Princeton, United States

“I DREAMT OF HAVING AN INTERNATIONAL CAREER”

LORRAINE TRUONG, 2014
Professional mountain biker and engineer at BMC Switzerland, Granges, Switzerland

“I LEFT FOR THE UNITED STATES IN 1991 TO DO AN MBA AND A MASTER’S IN INTERNATIONAL STUDIES. IN THE DIFFERENT JOBS I HELD, I THEN WORKED AND NEGOTIATED WITH COMPANIES BASED IN DIVERSE COUNTRIES. THAT TAUGHT ME TO BE PATIENT, CURIOUS AND FLEXIBLE. THOSE ARE VALUABLE QUALITIES FOR MY CURRENT POSITION AS EXECUTIVE VICE PRESIDENT OF TYCO, A COMPANY SPECIALISED IN FIRE SAFETY AND PROTECTION.”

But I gained much more than scientific expertise as a student at EPFL. Studying materials taught me humility. The way they behave is fascinating. I also learnt how to adapt quickly, find my own solutions and trust in my abilities.

I missed a lot of classes due to mountain biking competitions and training camps. But there were always people willing to help me catch up and lend me their notes. Even though being a high-level athlete somewhat cut me off from campus life, I met many wonderful people.”

Right after graduating in 2014, I signed a contract as a professional mountain biker with the Swiss bicycle manufacturer BMC. I also work as an R&D engineer in its design department. EPFL gave me a solid grounding in basic scientific knowledge, which I use every day in my work.

I graduated from EPFL in 1989. Back then, the school didn’t enjoy the international reputation it has today. After graduating, I wanted to leave French-speaking Switzerland and went to work at Dow Chemical in the Canton of Zurich. But I dreamt of having an international career.
Turning your **connectivity challenges** into **success stories** is what thrills us.

THE RELIABLE EXPERT

www.fischerconnectors.com
Physics Class of 1995
Where are they now?

Pursue an academic career or venture into the private sector? Many recent graduates are faced with this dilemma. While some continued in research, other alumni from the Physics Class of 1995 left their initial field of study, driven towards more concrete objectives.

However, all five of the graduates interviewed stressed the importance of their education, which gave them a solid foundation and strong analytical skills. How can a degree in physics lead to watchmaking or professional actuarial consulting? Chance, either due to unforeseen circumstances or personal interest, is often cited as the reason for the way things turn out. And chance sometimes gets it right.

Steve Riesen

GRÉGOIRE RIBORDY
45
GENEVA, SWITZERLAND

“A few weeks after graduating, I left for Japan to do a trainee programme in research and development at Nikon. Afterwards, I came back to Switzerland to do my PhD in quantum physics at the University of Geneva. In 2001, I founded my company ID Quantique, specialised in quantum cryptography. The idea was to develop and commercialise a prototype designed while working on my PhD to provide organisations with high-performance data protection solutions. We regularly work with EPFL and the University of Geneva. Their advances enable us to reduce risks, and we support their research with real-world findings.”

LÉONORE MIAUTON
44
CHEXBRES (VAUD), SWITZERLAND

“When I think back on my career, I see it a bit like a mosaic. After two years in optoelectronic research at the École polytechnique fédérale de Zurich, I realised that I wanted to stay in the field of research but didn’t want to do it myself. I followed my husband to Baltimore in 1999, where I worked in marketing for Johns Hopkins University. I changed continents again in 2003 to move to Singapore, where I set up my own IT company. In 2009, I returned to Switzerland. I was hired by EPFL as a community manager for the Nano-Tera research project, then as administrator for the National Centre of Competence in Research (NCCR) programme. And since 2013, I’ve been managing scientific projects at the Idiap Research Institute.”
OLIVIER KERN
44
BERN, SWITZERLAND

“I went on to do a PhD at the University of Bern, where I was part of a programme to develop a mass spectrometer that was used on a satellite. At the time, I was fascinated with physics, but I realised that research was painstaking work, and I needed more tangible results. After attending a seminar on social insurance, I went into professional actuarial consulting in 1999. I really liked the hands-on mathematical approach and became a Swiss certified pension insurance expert in 2004. I’ve since had the chance to pass on my knowledge to junior actuaries. Working with them has led to some interesting debates as they sometimes approach problems from a new angle.”

AUDE BILLARD
45
LAUSANNE, SWITZERLAND

“After graduating, I left to do my doctoral thesis at the University of Edinburgh. I obtained my PhD in artificial intelligence and then went to California to work as a researcher. I didn’t plan on coming back to Switzerland, but in 2002 I got an offer from EPFL to become a Professorial Fellow. An offer I couldn’t refuse! In 2014, I became full professor in robotics and microengineering.

A difference between the EPFL I knew as a student and the EPFL I know today? Back in those days, we didn’t have email. It’s a detail, but I don’t even remember how we got things done! Most information must have been passed on by word of mouth.”

FRÉDÉRIC OULEVEY
44
SAINT-GEORGE (VAUD), SWITZERLAND

“I followed up my programme at EPFL with a PhD in physics of materials. When the time came to choose a business sector after completing my studies, I definitely did not want to work with the military, which was a common career path in my field of research. I started out as an engineer at Rolex in 1999, because I was interested in watchmaking. I went on to take various managerial positions and in 2015 became product development director at Jaeger-LeCoultre.

I rapidly developed a passion for watchmaking, which combines both art and technology. Watchmaking drives us to innovate constantly while upholding tradition. Once we enter that world, we can never let it go.”

This photo was taken in the Polydôme in March, 1995.
Martin Vetterli will be the next president of EPFL

The new president of EPFL was announced on February 24th by the Swiss Federal Council, which confirmed the proposal submitted by the ETH Board. Martin Vetterli will assume his duties on January 1st, 2017, taking over for outgoing president Patrick Aebischer.

Born in Solothurn on October 4th, 1957, Professor Vetterli received his elementary and secondary education in the Canton of Neuchâtel. He earned a Bachelor’s degree in electrical engineering from the ETH Zurich (ETHZ) in 1981, a Master’s of Science degree from Stanford University in 1982, and a PhD from EPFL in 1986. Professor Vetterli taught at Columbia University as an assistant and then associate professor. He was subsequently named full professor in the Department of Electrical Engineering and Computer Sciences at the University of California at Berkeley before returning to EPFL as a full professor at the age of 38. He has also taught at ETHZ and Stanford University.

Professor Vetterli has earned numerous national and international awards for his research in electrical engineering, computer science and applied mathematics, including the National Latiss Prize in 1996. He is a fellow of both the Association for Computing Machinery and the Institute of Electrical and Electronics Engineers and a member the US National Academy of Engineering. He has published over 170 articles and three reference works.

Professor Vetterli’s work on the theory of wavelets, which are used in signal processing, is considered to be of major importance by his peers, and his areas of expertise, including image and video compression and self-organized communication systems, are central to the development of new information technologies. As the founding director of the National Centre of Competence in Communications Technology (NCC) in 1998, he is recognized for his successful leadership of this center.

“I am extremely honored to take over for Patrick Aebischer. EPFL is an outstanding school with an impressive international reputation. I look forward to helping the university grow and to taking it even further.”

Text: Mediacom
in Research on Mobile Information and Communication Systems, Professor Vetterli is a staunch advocate of transdisciplinary research.

Professor Vetterli knows EPFL inside and out. An EPFL graduate himself, he has been teaching at the school since 1995, was vice president for International Affairs and then Institutional Affairs from 2004 to 2011, and served as dean of the School of Computer and Communication Sciences in 2011 and 2012. In addition to his current role as president of the National Research Council of the Swiss National Science Foundation, a position he has held since 2013, he heads EPFL’s Audiovisual Communications Laboratory (LCAV).

Professor Vetterli has supported more than 60 students in Switzerland and the United States in their doctoral work and makes a point of following their highly successful careers, whether it is in the academic or business world.

He is the author of some 50 patents, some of which were the basis for start-ups coming out of his lab, such as Dartfish and Illusonic, while others were sold (e.g. Qualcomm) as successful examples of technology transfer. He actively encourages young researchers to market the results of their work.

“I am extremely honored to take over for Patrick Aebischer,” said Professor Vetterli. “EPFL is an outstanding school with an impressive international reputation. I look forward to helping the university grow and to taking it even further.” Mr. Aebischer stated that he was “very happy to be handing the keys of the school to such an eminent and talented person. I have full confidence in Martin, whom I know well.”

EPFL has undergone many changes during Mr. Aebischer’s presidency (2000-2016). The number of students rose from less than 5,000 in 2000 to more than 10,000 in 2015, while the number of professors more than doubled. According to leading university rankings, EPFL is one of the top 10 engineering schools in Europe and among the 20 best universities in the world in the field of engineering.

Professor Vetterli will take over as president of EPFL on January 1st, 2017. He was appointed for a renewable four-year term.
Digital technology has not only revolutionised the global economy in the past few years, it has completely taken over our society, fundamentally changing the way we do things. Alumnist takes a closer look at the phenomenon.

These days you can have your meal delivered with a simple click, recruit a new employee via social media, book your next holiday on your smartphone and measure your heart rate using a smart wristband. None of that existed a few years ago. Yet today, we don’t even think twice about it. Some believe the digital takeover is a sort of third industrial revolution. However, this one is happening much faster and is much more powerful than previous social and economic transformations and is bringing with it a lot more new technology. Digital technology spreads quickly in time and space and changes how we consume, how we communicate and even how we approach “being”.

“The digital revolution integrates our practices to the point where we barely even notice,” says the sociologist and new media expert Olivier Glassey. “It has been streaming into our day-to-day activities continuously over the past 15 years or so. No area of our lives has been spared. The act of ‘connecting’ has virtually become obsolete, because we’re always connected.”

In 2015, there were five billion connected objects in the world. By 2020 that number will increase to 25 billion. More than two billion smartphones are on the market, not to mention the two billion Facebook users, one billion people communicating on WhatsApp and the thousands of apps developed every week. The impact of digital technology can be felt at every level. “The transformation began in the late 1990s with the emergence of the Internet. But everything changed in 2007 when smartphones hit the market,” says Pascal Meyer, founder of the online shopping website QoQa.ch. “Now that we hold the web in our pocket, we do everything on our smartphones.”

Smartphones currently drive more than 50% of all e-commerce traffic. They are the symbol of that constant connectivity that goes along with, according to Glassey, a tendency to overemphasise the value of immediacy. “The way we think about time is changing. Temporality has become fluid. Consumers want things faster and are becoming impatient. People look for opportunities tying in with their ‘here and now’. They’re after an experience.”

If the product is good, the service reliable and the technology meaningful, users adopt new behaviours very fast. If all the ingredients are there, things can rapidly go viral on the Internet.

Text: Séverine Géroudet, Céline Bilardo et Julien Calligaro
Photos: Hervé Annen
MOBILITY
“CARS ARE NO LONGER THE PATH TO FREEDOM”

New technology has had a strong impact on mobility. This is reflected in how people now use means of transportation, travelling between home and work or simply from point A to point B within a city. “The perception of travel time has radically changed in the past ten years,” says Vincent Kaufmann, professor of urban sociology and mobility analysis at EPFL. “A commute is no longer considered downtime! New technologies mean commuters can work while on the go, with everyone connected and communicating when they want. The commute can be long, but at least it can be used to perform a task or send an email.” With the development of driverless vehicles, the car itself will offer new possibilities, like becoming a new mobile office.

“Traditional” passenger cars pollute and come with many constraints. The new generation does not seem all that interested. They prefer public transport. “Cars are no longer the path to freedom for young people,” says Vincent Kaufmann. “Getting a driver’s licence doesn’t hold the same appeal that it used to. Teenagers now leave the family setting via social media.” And new mobility upstarts have dramatically transformed urban transport. Who needs their own car when you can rent one per kilometre (Mobility Carsharing), share your journey with a driver who is travelling to the same place (BlaBlaCar) or hail an Uber in a couple of clicks.

Steve Salom (SC’05), Uber’s General Manager for Western Switzerland, notes that people want to maximise the resources available to them. Judging from the company’s success – already with tens of thousands of regular users in French-speaking Switzerland since its launch in 2014 – Uber meets a real demand. “Buying a car doesn’t represent the same challenge that it used to,” Salom says. “Consumers want to optimise their spending, and services like ours available on their smartphones now let them do that.”
This digital takeover driven by continuous connectivity has created a “cyberworld”, i.e. a new space for communication, transaction and even meeting, bringing a thousand possibilities within a few clicks. Many habits that used to be part of the “physical” world have now shifted to this new place that brings people together. These days, we do our shopping online, read a book on a tablet and store our photos on our smartphone. We practically never talk on the phone but message via connected apps, etc. “And that’s just the beginning, because with virtual reality, a parallel world is developing that looks and feels even more real than reality,” Meyer says. “Its potential is infinite. One day, we could be testing new cars virtually instead of physically.”

Olivier Glassey believes that the most distinctive feature of this cyberworld is the constant flow of information. “We’ve gone from a world where information was hard to get to one where it’s everywhere and continuously flowing,” the sociologist says. “That has completely changed the way we communicate and perceive news.” When an important event takes place, information flows online within minutes through hashtags, tweets, videos, photos and so on. The recent example of the terrorist attacks in Europe demonstrated the reach of this uninterrupted flow of information. Communication is so immediate that many people were able to find shelter in a safe place in Paris for the night. “That’s having a strong impact,” he says. “With new information technology, we can get involved and coordinate our efforts at virtually no cost.”

We can now communicate for free, listen to music without buying it, order something online and have it delivered the next day or even share photos, information and lodging. The digital revolution has undeniably made things cheaper and easy to use. In some ways, we can even become smarter consumers. Why buy a whole album when we can just choose the best song on iTunes? Why pay a cable operator for television when, with video-on-demand systems like Netflix, we can watch what we want when we want? Why have a car if we only use it an hour a day? We may as well let others use it on car-sharing platforms.

**FOOD**

**“MEANING AND AWARENESS GO INTO WHAT WE EAT”**

If there is one area that is experiencing and will experience major revolutions due to changing behaviours, it’s definitely food. The issue is complex. Food is about combining enjoyment and health, ever faster service—we spend an average of 30 to 40 minutes at a restaurant as opposed to an hour and a half in the 1980s—and a diverse offer. All industry leaders are interested in moving into the area. The revolutions expected to come include the development of new foods, clarity and transparency about food products and the taste experience itself. The expert Christine Demen Meier, professor at the Lausanne Hotel School notes how deeply rooted technological behaviour is in the habits of new consumers and in their need to bring meaning to every act of consumption. Access to information is now easier and faster. That means people have become more aware of what they’re eating and now want to know where the ingredients in their food come from. Philippe Ligron, culinary arts teacher and radio host, points out that the “Airbnb symptom” has also developed in gastronomy with the success of apps such as VizEat, a community in which users share home-cooked meals together. “People are looking for novelty and a rich human experience. And social media promote that kind of sharing.”

Experts also observe the role of new technology in consumer awareness about the environment and waste management. As people become more concerned with the long-ignored issues of fighting food waste, unsold food items, leftovers and even expired food products or waste are now garnering interest. Even restaurants that are waste-free or cook unsold food have cropped up. Sharing and online communities support this trend and provide many ways to become a smarter consumer. For example, Tasty is an app where users can look for leftover portions of food available in their neighbourhood.

Further reading
Elisabeth Sloan, “The top ten food trends”, in Food Technology, April 2015.
EMPLOYMENT

“THE RECRUITMENT PROCESS INCREASINGLY USES SOCIAL MEDIA”

The job market is undergoing tremendous changes. The cause? New technology. Workers are increasingly mobile, with new possibilities in coworking and telecommuting. Telecommuting, sometimes called teleworking, has developed significantly in Switzerland. More than 25% of the population regularly works from home, according to a study by the consulting firm Deloitte.

But the changes due to new technology also affect human resources management and, more specifically, the recruitment phase, with social media playing a more important role. Only an estimated 4% of Americans never use social media in their hiring process. Unsurprisingly, LinkedIn is the tool most commonly used by recruiters. A few years ago, the professional social network developed a function that lets users apply for a job directly online. “No precise figures are available on the use of social media in recruitment in Switzerland,” says Mathias Rossi, director of the Institute for Entrepreneurship and SME at the School of Management Fribourg (HEG-FR). “The phenomenon is not yet very widespread, but the trend is developing.”

Massive Open Online Courses or MOOCs are another new tool used in the hiring process. Some companies buy information on people that take these online courses to select candidates based on their marks and their behaviour. Others create their own MOOCs to strategically train their future employees. Degrees awarded through MOOCs are gradually beginning to be taken seriously by HR departments. Another trend that has come straight from the United States is the use of gamification in recruitment. Instead of posting a job ad online, more and more employers now choose to turn candidates into players to test their abilities. “That acts as the first filter, based on applicants’ reaction to a simulated real-life situation,” says Mathias Rossi. “More importantly, this method is more objective than traditional interviews as it does not let certain biases get in the way of judgement.”

Testimony of a creator of MOOCs at EPFL

Jean-Cédric Chappelier

“MOOCs have revolutionized the format and structure of traditional courses, and have also increased students’ commitment and motivation. MOOCs facilitate more varied and modular teaching methods, such as videos, quizzes, exercises, etc. Students can take responsibility for the way they learn. They learn the basics themselves, at their own level and their own speed, according to their individual needs. As lecturers, my colleague Jamila Sam and I had to completely rethink our lectures... Our contribution to this new way of lecturing, as part of four MOOCs, was recognised with the 2015 Crédit Swiss award for best teaching.”

Further reading


Digitisation has brought about a new, horizontal economic model based on sharing and collaborative communities. “Peer-to-peer and online platforms have led to the development of the sharing economy. We can be everywhere at the same time and be both consumer and producer, customer and service provider,” says Andrew Tarling, a researcher at the Global Center for Digital Business at the IMD Business School in Lausanne. We now share our resources, and this new collaborative economy has changed how we do things and how we view ownership. Owning something loses its importance when we have easy access to a good or service.

All sorts of sectors and industries – mobility, finance, media, public services – are affected by these new behaviours. And these behaviours develop quickly with the services available on the market. The new models are referred to as “disruptive” because they totally change existing models, to the point of redefining or even eliminating them.

TOURISM
“NOW ANYONE CAN ENJOY THE TRAVEL EXPERIENCE”

People travel differently now than they did a few decades ago. The most striking example is the development of Airbnb. In 2015, the peer-to-peer travel accommodation platform broke through the million mark in listings on its website. Why is it so popular? “The Airbnb interface is more attractive and user-friendly than the websites of traditional hotels, featuring a vast offer and more transparent information,” says Roland Schegg, eTourism professor at the University of Applied Sciences Western Switzerland (HES-SO) Valais-Wallis. “That builds trust between partners.” Another factor is that a growing number of people can now treat themselves to high-end holidays. New online booking platforms have brought prices down, making it less expensive to travel to premium destinations. Theme holidays – wellness, trekking, gastronomy and even digital detox – are also a developing trend. These getaways are sold as a package, taking the boring, time-consuming part out of organising a holiday.

Lastly, one of the major shifts is that holidays are becoming more virtual than ever. No one travels to the other side of the world without telling everyone about it. People now take their friends and followers with them on Facebook, Twitter and Instagram. The development of augmented reality has also fuelled this trend towards virtual. Wearing a headset and mask, people can enjoy the experience of flying over Manhattan in a helicopter or climbing a mountain in Canada. This new form of excursion is currently used by travel agencies such as Thomas Cook to give customers a taste of what awaits them at the destination of their choice. But the power of images can rapidly dominate the actual experience, as people can imagine what it feels like to be in a world that is not their own. “Virtual reality could very well one day be used by some consumers as a ‘getaway’ in itself,” Schegg says. Without having to get off the sofa.

Further reading:
“L’avenir du voyage 2024”, a report by Skyscanner, 2014, available online
FINANCE
“SELF-SERVICE IS KING”

“Finance is experiencing a paradigm shift,” says Guillaume Dubray, founder of Fusion, a fintech accelerator based in Geneva. “People don’t trust their bank as easily these days.” That is due to the financial crisis and the coming of age of Generation Y. But they don’t necessarily have to, thanks to the development of financial technology, or fintech. This explosive cocktail has sparked new behaviours. The increase in the number of users of mobile financial services could double to 1.8 billion by 2019, according to a study by the audit and consulting firm KPMG.

What is the impact on banks? “They use new technology to streamline their processes and structure their costs,” Dubray says. “That way, they can increase their margins.” But some banks have complex IT systems and are having trouble adapting. And that paves the way for start-ups to move in. Young fintechs such as Paymit and TransferWise primarily offer mobile payment or money transfer solutions without going through banks. These free apps available 24 hours a day have driven money transfer costs down nearly 90%. Intermediaries and fees have become a thing of the past. Transactions are made directly from smartphone to smartphone.

Another development is that individual investors are now dabbling in products that were originally designed for professional money managers, such as trackers, i.e. listed index funds used to invest in a large number of market indices. The technology reduces the cost of these tools and makes them easier to use. “Self-service is king,” Dubray says. “No one works with advisors any more. Instead, they start by comparing offers and then follow the recommendations of people they know.” Or, they turn to artificial intelligence. The Bank of Tokyo-Mitsubishi UFJ provides its customers with robo-advisors that recommend investments based on algorithms.

Massive Open Online Courses (MOOCs), are undergoing similar transitions. “Digital disruption has the potential to revolutionise and reorganise markets faster than any other phenomenon in history,” the researcher says. “Traditional companies have to adapt and transform if they want to remain competitive.”

Pascal Meyer believes that, to remain a positive evolution, the disruption must not completely take away everything consumers know. Despite being irreversible in form, it should not replace but rather enhance and improve the customer experience. “Older models should be the basis for this evolution, so that we still have something to identify with. Of course, as with any change, we have to give up something from our old ways. Just look at what happened to faxes and cheques.” But the best offer, the improved service or the quickest access will clearly win out every time.

Further reading


Tensions couldn’t be higher between the traditional and digital worlds. Traditional organisations operate in a heavily regulated and taxed environment, while their digital counterparts are freeing themselves of borders and regulations, not to mention social security contributions. The gripping from hotels about Airbnb or from doctors whose traditional offices are being replaced by digital ones is therefore understandable. But the emergence of new technology has also highlighted the bias in some industries. When Uber came to France, attention was drawn to the outrageously expensive cost of taxi licences. “A lot of ground rules need to be rewritten to accommodate these newcomers in the market,” Glasssey says. “We can’t just work around that solely in the name of technological development.” Some systems, skills and roles will have to be rethought altogether.

The digital revolution has been negative in many ways for those industries struggling to adapt quickly. But for consumers, the experience has been a positive one overall. That’s not to say it’s without risk. Nowadays, many young people essentially build their social lives online via social media. But they have to make sure that these virtual relationships don’t take precedence over human relationships. This endless and limitless universe can create a paradoxical form of connected solitude. “As humans, how can we find our place in that system? How can we keep it at a human scale?” says Glasssey. “The hybridisation of the physical and digital worlds is vital. The challenge is to use these digital tools in ways that contribute something for us in real life. We have to learn how to navigate simultaneously in both worlds.”

The emergence of the sharing economy shows that we’re on the right track. Solidarity isn’t dead. Digital technology has become both a medium and a vehicle for exchange that creates real social ties, with the peer-to-peer rental of cars, rooms and meals. Brands that used to operate mainly online are now organising events or creating pop-up stores to get people in contact with each other. “Digital media can be used to bring together an impressive number of people and form real communities,” Meyer says. “That’s one of its greatest strengths, but this virtual proximity must also be transposed into physical events. Human contact must be maintained.”

Disconnecting is not so easy these days. The popularity of digital detox camps suggests that we can’t always do it on our own. Remaining continuously connected makes us believe we have to react fast. And that creates a form of dependence. The constant influx of information is so dizzying that we become lost in it, unable to discern true from false. “The key is to keep things manageable, know how to sort through it and find meaning,” Glasssey says. “We need to keep in mind that the digital world is not purely human. It is governed and sometimes skewed by algorithms or invisible social bots that decide what is interesting for each of us, based on our online activities.”

That’s where the danger lies. The systems are not so transparent. In the era of big data, we all leave traces online. But how is our personal data used and to what end? These systems are still very young. The disruptive aspect leads people to give up one thing for another, but will the new way still be appealing in the future? What will the cost of these changes be? What’s worse is that most of these new digital tools are controlled by large companies that are extending their

**HEALTHCARE**

**“MOVING TOWARDS PERSONALISED, MOBILE HEALTHCARE”**

“Healthcare and medicine are on the verge of major change.” Bertrand Kiefer, chief editor of the medical Revue Médicale Suisse, says that smartphones, the Internet of things and other embedded systems are transforming healthcare. We’re moving towards personalised, mobile healthcare. “These new tools that measure and monitor our health have a mostly positive impact. People can play an active role in their health, driven to pay closer attention and take more preventive action,” the expert says. “This new technology will eventually reshape medicine and the way we care for patients and ourselves. The role of hospitals will also evolve, as the patient pathway will focus more on outpatient care.” Doctors will be able to monitor patients remotely using information gathered and transmitted by these tools. In turn, patients themselves will take the responsibility away from healthcare providers to handle many things – not just blood and other tests but also health checks and screening – right in their own home.

The cyberworld will be flooded with data due to the phenomena of the “quantified self” and mobile health. Even non-medical sensors, such as GPS, can now provide information on people’s health. For example, a person suffering from depression walks more slowly and moves less often than healthy people. “Health data offer a wealth of information to both medicine and scientific research and to companies that handle big data,” says Bertrand Kiefer. “So we have to be careful with this new power and not act too naively. We should also make sure that health monitoring does not lead to standardised behaviour or create more hypochondriacs. Healthcare providers shouldn’t prevent the quantified self from emerging but work to educate patients, share their knowledge and build a new health literacy.”

Further reading


monopoly. How can we continue to play a role and contribute as citizens in this world and not just exist as customers? Olivier Glassey believes that we have to want these changes and not just be subjected to them under pressure from those in a position of power in this world. This is especially relevant as machines are increasingly able to make decisions by themselves.

“Digital technology is currently in a position where its future can go in very different directions,” the expert says. “I don’t at all see them as necessarily being disaster scenarios. Quite the opposite. However, we definitely must defend and renegotiate the role of humans.” Hard work is needed to make sure that people understand the changes in progress. Once they do, we can enhance and promote human capital. Governments are currently responsible for this aspect, creating a regulatory, competitive and tax environment that is compatible with innovation, guaranteeing the quality of data, the key to civil liberties, and contributing to bringing about an international governance system for digital technology.
EPFL has continued to evolve, grow and develop since it was founded. The school has enhanced its teaching and expanded its research to attain the level of excellence and international reputation it enjoys today.

Alumnist has taken a look back at the past 40 years, highlighting the years 1975, 1995 and 2015 to illustrate the school’s growth in a few significant numbers. In 40 years, the percentage of students has tripled, driven by EPFL’s equality policy. Despite a drop in the number of international students in the 1990s, their attendance has continued to rise ever since. International students now represent half of our enrollment, making EPFL one of the most diverse schools in the world.

To accommodate a constantly growing number of students and faculty members, the campus has had to adapt and undergo tremendous development. Today, EPFL stands as a real community, a place where people come together to share and engage with each other.
<table>
<thead>
<tr>
<th>NUMBER OF PROFESSIONALS</th>
<th>STUDENT ASSOCIATIONS</th>
<th>NUMBER OF ALUMNI</th>
<th>ANNUAL SCHOOL BUDGET (IN THOUSANDS OF SWISS FRANCS)</th>
<th>CAMPUS</th>
<th>NUMBER OF SECTIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>94</td>
<td>0</td>
<td>3,577</td>
<td>77,918 kCHF</td>
<td>29,000 m²</td>
<td>9</td>
</tr>
<tr>
<td>134</td>
<td>9</td>
<td>10,640</td>
<td>434,559 kCHF</td>
<td>373,000 m²</td>
<td>12</td>
</tr>
<tr>
<td>338</td>
<td>66</td>
<td>31,170</td>
<td>965,047 kCHF</td>
<td>731,000 m²</td>
<td>16</td>
</tr>
</tbody>
</table>

spread across different sites (Lausanne, Fribourg, Neuchâtel, Valais, and Geneva)
This non-exhaustive list of events will be updated regularly. Visit our website www.epflalumni.ch and the EPFL Alumni group on Linkedin to make sure you don’t miss anything, and make sure we have your correct email address.

**July**

**Boat Tour and Fireworks for Züri Fäscht**
JULY 1

The EPFL Alumni Association of Eastern Switzerland has organised a boat ride aboard the MS Linth to watch the fireworks for Züri Fäscht, a celebration that takes place every three years over the first weekend in July. This event offers the perfect opportunity to spend time with other alumni while enjoying an amazing view of the fireworks and dinner on the boat.

**September**

**Adobe Research Company Tour in Basel**
SEPTEMBER 7

Join us for a tour in English of the Adobe Research office in Basel! You can find out more about this successful company whose products we use every day. Adobe was founded in 1982 and develops a number of software applications, including Acrobat, Photoshop, Illustrator and Dreamweaver. The Basel-based company DAY Software was bought in 2010 and became a research centre for Adobe Experience Manager (AEM) and other projects.

**AFTER-WORK DRINKS IN BERN**
SEPTEMBER 27

The third edition of our after-work drinks event will take place on Tuesday, September 27th, at 6:00 p.m. at the restaurant Lütschberg (Zeughausgasse 16). No need to register. Just show up!

**October**

**Tour of the Global Health Institute**
OCTOBER 13 (TBC)

The fourth EPFL laboratory tour in 2016 will be at the Global Health Institute (Institut de recherche en infectiologie). Further information and the link to register for the event will be sent this autumn.

**November**

**Alumni Gala**
NOVEMBER 4

Join us for this prestigious campus event held for you and your friends, including a jazz concert, exclusive tour of ArtLab and speeches by Patrick Aebischer and Martin Vetterli. Don’t miss it! Register now at go.epfl.ch/gala

This non-exhaustive list of events will be updated regularly. Visit our website www.epflalumni.ch and the EPFL Alumni group on Linkedin to make sure you don’t miss anything, and make sure we have your correct email address.
Dean of the School of Basic Sciences at the Ecole polytechnique fédérale de Lausanne (EPFL)

EPFL – the Swiss Federal Institute of Technology Lausanne – is one of the foremost European institutions of science and engineering. EPFL fosters transdisciplinary research and technology transfer together with a first class infrastructure. Engaged regionally, nationally and internationally, its campus provides an exciting intellectual environment located in the French-speaking region of Switzerland, on the shores of Lake Geneva, at the foot of the Alps. For more information about EPFL, please visit www.epfl.ch.

The School of Basic Sciences comprises Mathematics, Physics, and Chemistry. With more than 130 faculty members, 710 staff, 1500 bachelor and master students, and 500 PhD students, it is the largest School at EPFL and has a central role in teaching and research. The School also hosts a number of research centers, such as the Swiss Plasma Center and the Bernoulli Center, as well as technical platforms to support research activities. More detailed information about the School is available at sb.epfl.ch.

Reporting to the President as part of EPFL’s senior administration, the Dean provides vision and leadership across the School’s teaching and research activities, manages its corporate business and administrative responsibilities, and represents the School at the campus, regional, national, and international levels.

The successful candidate will be an inspirational leader with outstanding achievements in research and teaching, a past record of academic community service, demonstrated managerial capabilities in a university setting, and evident collegial skills.

S/he will have a long-term vision for teaching and research for all three areas of basic sciences at EPFL as well as for gender balance and the planning of academic careers.

Experience in organizing collaborative teams and programs, involving both internal and external partners, will be an important asset. A prior working knowledge of French is not required.

The position offers competitive personal compensation, tenure at the full professor level, and financial support for the candidate’s research program. The candidate should be willing to act as Dean for at least one term of 4 years and to start as early as possible in 2017.

Inquiries, nominations, and expressions of interest can be addressed to:
Prof. Michael Unser, Chair of the Search Committee
michael.unser@epfl.ch

Prof. Harald Brune, Chairman of the Search Committee
harald.brune@epfl.ch

EPFL is committed to increasing the diversity of its faculty, and strongly encourages women to apply.

Dean of the School of Engineering at the Ecole polytechnique fédérale de Lausanne (EPFL)

EPFL – the Swiss Federal Institute of Technology Lausanne – invites applications for the position of Dean of the School of Engineering.

With an international reputation for excellence, EPFL is one of the foremost European institutions of science and technology. Known for the highest standards of academic distinction and community contribution, EPFL fosters transdisciplinary research collaborations and technology transfer with a first class infrastructure. Deeply engaged regionally, nationally and internationally, its campus provides a unique and exciting learning environment located in the French-speaking area of Switzerland, next to Lake Geneva, at the foot of the Alps. For more information about EPFL, please visit www.epfl.ch.

The exceptional quality of teaching and research of the School of Engineering is internationally recognized. The School has a strong track record of major technological advances and strategic ties with industry, academia and government. With more than 120 faculty members, 2'200 students in bachelor and master programs, and 700 PhD candidates, the School’s extensive research program is funded through public and private sources including the Swiss Confederation, the European Union, private foundations and industrial partners.

Additional information about the School is available at sti.epfl.ch.

Reporting to the President as part of EPFL’s senior management, the Dean provides vision and leadership across the School’s teaching and research activities, and oversees its administration.

The successful candidate will have an exemplary academic record, recognized achievements in research, teaching, scholarly activities and service, demonstrated leadership in a collegial university setting, and the ability to inspire. Possessing outstanding management and interpersonal skills, s/he will be committed to fostering interdisciplinary teaching and research and to promoting the endeavors of the School at the campus, regional, national, and international level. Experience in building diverse and collaborative teams, relating to a range of internal and external partners, and experience in fundraising will be important assets in this role. A prior working knowledge of French is not required.

The position offers competitive personal compensation, tenure at the full professor level, and financial support for the candidate’s research program. The candidate should be willing to act as Dean for at least one term of 4 years and to start as early as possible in 2017.

Please submit a curriculum vitae, a vision statement and the names of up to five professional references by August 31st, 2016 using the following website: https://academicjobsonline.org/ajo/jobs/7284.

Inquiries, nominations, and expressions of interest can be addressed to:
Prof. Michael Unser, Chair of the Search Committee
michael.unser@epfl.ch

Prof. Harald Brune, Chairman of the Search Committee
harald.brune@epfl.ch

EPFL is committed to increasing the diversity of its faculty, and strongly encourages women to apply.
Limited seats, 800 attendees
Guest list and registration on go.epfl.ch/gala_en

Alumni contributors 75.–
Alumni non contributors and partners 125.–

17:30 Welcome drink at Rolex Learning Center
18:00 Guided tours of ArtLab and Montreux Jazz Café
19:00 Welcome address by Patrick Aebli, EPFL President
and Martin Vetterli, President designate from 2017,
Science quiz and awards ceremony
20:30 Dinner cocktail and jazz concert
22:00 Dance and Champagne bar

5–6 November EPFL Open Days and weekend of scientific activities on campus