Excellence Scholar Müge Özlütiras as tutor at the ETH Week 2018

HIGHLIGHT DESTINATION SWITZERLAND

The students supported at ETH Zurich through an Excellence Scholarship come from every conceivable country – above all Switzerland, Germany and the USA, followed by China, Austria and India. But where do the new graduates head after passing their final exams?

Statistics for the years 2007 to 2015 show that around 30 percent of Excellence Scholarship holders come from Switzerland. More than twice as many, 77 percent on average, stayed here after completing their education and either found a job in industry, started their own business or continued their academic career at a Swiss university. The reasons for this are manifold: personal motives, good working conditions, and above all the network that they were able to build up during their training thanks to the Excellence Scholarship. The long-standing, loyal support of the donors means that these young professionals can apply their knowledge, drive and motivation to contribute to the well-being of the Swiss economy and the competitiveness of local universities. This ultimately benefits the entire country.

The backgrounds and personal biographies of the young scholarship holders are as diverse as their interests and professional skills. Some promising young talents of the last ten years are presented on the following pages.

ANNA SAUR

Excellence Scholar 2016 – Management, Technology and Economics

Source: ETH Zurich Foundation

Anna Saur has chosen the Master's Programme in Management, Technology and Economics (MSc ETH MTEC). She is currently doing an internship in the Mercedes-Benz Cars department at Daimler Greater China in Beijing. In October she will start a second internship in Supply Chain Management at On Running in Zurich.

"Even before embarking on my Master's degree I was interested in optimising business processes. My key motivation is to improve things. Perfectly coordinated processes have so many positive effects: work becomes more pleasant for everyone involved, the quality of a product or service improves, the customer becomes more satisfied and, last but not least, efficient processes are also more environmentally friendly – for example making optimal use of trucks means producing fewer greenhouse gases per unit.

It's thanks to the Excellence Scholarship that I was able to finance my internship at Daimler in China. Here I support my team in developing the construction of various vehicle series locally. Of course, we have to take into account local regulatory requirements and other features specific to China, such as longer axle spacing. These 'localization projects' therefore require a great many discussions and coordination rounds with colleagues from various areas.

I like gaining insight into the strategy and business processes of Daimler Greater China and into Chinese working culture. At the same time, it's very challenging: the cultural differences between China and Switzerland are very great, especially in communication. In addition, in a large company with a long tradition, the communication channels are long and confusing, and there's a strong hierarchical mindset. That's why I'm very excited about my next internship at On where the hierarchies are flat and the communication channels short.

Looking back, applying for a Master's degree at ETH Zurich and the Excellence Scholarship was the most important decision in my career so far.

I think the MTEC program, with its varied lectures and practical case studies, prepared me perfectly for my daily work. For example, I learned how to structure ideas and concepts from different areas clearly and to present them convincingly. Various lectures have also trained us to think critically. This is particularly essential in the day-to-day work of a large corporation in order to be able to improve established work processes."

DAVID MZEE

Excellence Scholar 2013 – Human Movement and Sport

Source: ETH Zurich Foundation

David Mzee has always been passionate about sports. So it was only natural for him to study Human Movement Science and Sport at ETH Zurich. In addition to his studies, David trained in martial arts, handball, basketball and football as well as skating and skiing. During a special training session, David was seriously injured and has been wheelchair-dependent ever since. However, this did not stop him from playing sports – on the contrary, monoski bobsledding, handbiking, badminton, tennis and above all wheelchair rugby are now his favourite sports. David completed his Master's degree in 2016 and won the Willi-Studer Prize, which is awarded every year at ETH Zurich to the best graduate from each Master's degree programme. He gained a teaching diploma in February 2018, and is currently looking for a position as a sports teacher at a cantonal school. As a former Excellence Scholar, David now also supports the Excellence Scholarship as a donor.

"I'm particularly proud of the match where our wheelchair rugby national team competed against the Olympic and world champion Australia at the Canada Cup 2014. Our performance at the World Cup qualification 2018 was another highpoint. I've now developed a training concept for young athletes in wheelchair rugby. The aim is to improve the quality of the training even further and to make it easier for youngsters to get into top-class sport.

Combining study and sport required discipline, precise planning and a supportive environment. In addition, the helpfulness of ETH Zurich, a flexible national trainer and, last but not least, the Excellence Scholarship were decisive factors. Without this support, I would have had to work more while studying, which would have had a negative impact on my studies, sports or both. In addition to the financial advantage, the exchange with other highly motivated students and professors was a big plus. Overall, the Excellence Scholarship has considerably strengthened my self-confidence. I would also advise all current and future Excellence Fellows to attend the cool events organised as part of the programme.

My studies covered a lot of things – from training theory, physiology and biomechanics to sports physiology and nutrition, which I can apply directly to sports myself. In addition, discipline, perseverance and persistence are qualities that you need both for study and in sport, and which you can also train yourself in.
Another former scholarship holder gave me the idea of becoming a patron myself.

Since I'm so familiar with the Excellence Scholarship, I know that the money is well spent there. It's great to give something back and keep a good thing going."

RAFAEL SCHMITT

Excellence Scholar 2011 – Materials Science

Source: Rafael Schmitt

Rafael Schmitt studied materials science at ETH Zurich and graduated in 2012. In both his Bachelor's and Master's theses, he focused intensively on solar cell research, but his doctoral thesis was on memristors that could be used for future computer memories. Today Rafael works as a project manager at Exentis, a young company that offers tailor-made customer solutions for mass production using a new 3D printing process.

"During a lecture in material physics in which we studied the photoelectric effect, I was very enthusiastic about how light can be converted into electrical energy – the basic principle of a solar cell. Then it was clear to me that I wanted to get involved in solar cell research. After two successful research projects on thin-film solar cells, however, I wanted to get to know other areas. In my doctoral thesis, I dealt with components made of electrochemical materials, called memristors, in order to investigate a new approach for future computer memories. Today, as a project manager at Exentis, I'm working on developing customer-specific product solutions using 3D screen printing technology. For example, we've developed a vehicle catalytic converter with a novel helix structure that can only be manufactured using a process patented by Exentis. We've also created a special ceramic for this purpose, so that a much better catalytic effect can be achieved overall. In the end, this leads to a significantly reduced emission of pollutants. From solar cell research to computer memory to 3D printing – material science, which plays a central role in almost all areas, remains the central theme.

My motivation is the following: I want to understand in order to improve afterwards. I like to change what already exists and thus create the technology of tomorrow. For me, it's also about giving something back to society in this way.

When I think back to my ETH studies, I learned to walk in my Bachelor's degree course – figuratively speaking, of course. There it was a matter of acquiring the basics and the tried and tested. During my Master's degree, I then reached the limits of today's knowledge and had to get accustomed to independently breaking new ground and discovering the unknown. I think ETH offers an ideal platform for acquiring exactly this independent searching and discovering.

I still have a strong emotional attachment to ETH Zurich and feel part of the ETH family. I think it will stay that way for the rest of my life."

FELIX BÖWING

Excellence Scholar 2016 – Electrical Engineering and Information Technology

Source: ETH Zurich Foundation

Felix Böwing is studying electrical engineering in his last year. Since the beginning of 2017 he has been volunteering at BuyAware. This group of young students from all over Switzerland provides information on the social and ecological manufacturing conditions of smartphones. BuyAware thus enables consumers to take these criteria into account when buying a new device. As a long-term vision, BuyAware wants to make the electronics sector more sustainable.
www.buyaware.org

"At BuyAware I was first responsible for the development of the new website. Now I'm increasingly active as a workshop leader. At these events we first discuss the social and environmental impacts of the electronics industry and then guide you through our rating concept. I gave my first workshop at Impact Hub Zurich, a community of entrepreneurs, creatives and techies who work together in a network and develop solutions for a sustainable future. The next workshop will be held in cooperation with the Sustainability Week Commission at the University of Zurich in October. Besides that, I also take care of IT at BuyAware.

As an electrical engineer, I like BuyAware because I can help make my own department more sustainable. In my opinion, this aspect is somewhat neglected during my studies. The production of electronics is very complex and often causes great environmental pollution and social injustice. As the supply chains are international and thus largely escape national legislation, it's up to the consumer to decide which negative effects should not be tolerated. BuyAware evaluates the sustainability and social compatibility of mobile phones and wants to establish the first 'bio-label' for electronics. This should make it possible for consumers to find out about the various production standards and make the appropriate purchasing decisions – following the example of the food sector.

At BuyAware I've seen that for a commitment that excites me, I can release capacity that I would not have thought possible.

But I can only get so involved with BuyAware because I've chosen a course of studies that I'm convinced of. This is why I'm able to commit myself to another good cause with a clear conscience and put a lot of time into it.

I like my studies because I can acquire the theoretical basics of information technology, which in general one knows only from the user side. At BuyAware I can apply this basic knowledge to a certain extent. All in all, however, I simply have a welcome practical experience that doesn't have so much to do with my studies.

In the future, I'd like to use my knowledge of information technology to help tackle complex technical challenges and develop innovative solutions for the benefit of people. What this can mean in concrete terms is something I would like to try out first in my Master's thesis."

Linn Bieske is an outstanding researcher and inventor and has already won numerous prizes for her innovations. In 2013, at the age of 19, she won a "Jugend forscht" prize for her development of an intelligent dental prosthesis. In 2014, she took second place in the „i hoch 3" inventors' competition hosted by the German Federal Ministry of Economics and Technology (BMWi) for the development of an antenna integrated into a window pane. This enables optimal wireless communication via mobile phone or WLAN even with thermal insulation glazing. Having completed her Master's degree in materials science at ETH Zurich in the summer of 2018, Linn Bieske is attending a Master's programme in business analytics at the Imperial College Business School in London. She is currently back in Zurich for her final internship at the Boston Consulting Group. Linn is considering doing a doctorate and therefore looking for a project in which she can contribute her interdisciplinary knowledge as best possible.

"Observations in everyday life stimulate my critical thinking. I don't just want to accept problems and challenges, I want to uncover them, analyse them and develop solutions for them. This is how I constantly come up with new research ideas.

In my Master's thesis, I researched how to absorb light and give a material surface a colour. I had to develop structures of only a few nanometers that could specifically capture certain wavelengths. In addition, I had to develop a manufacturing process that could be applied quickly and over a large area. However, absorbed radiation not only produces a colour, but can also be converted into other forms of energy. My research could therefore also serve as a starting point for new concepts of energy generation. For example, it's conceivable that the developed material could recover radiant waste heat on the walls of industrial plants.

Often the existing technology is not sufficient for tackling future challenges and complex issues. New approaches are needed and this requires creative, critical thinking. That spurs me on. I'm thrilled that I can use my knowledge to create something new in completely different fields of technology. I also find it very motivating that some of the solutions I've devised can be applied in a variety of ways, such as light absorption to generate colour and energy. Developing previously unknown, marketable technologies to solve exciting problems – that's definitely my thing.

For me, ETH Zurich is a place of continuous further education, inspiration and friendship.

The Excellence Scholarship has not only enabled me to develop academically, but has also brought me into contact with wonderful people. These experiences are still groundbreaking for me today."

NIKOLAY KOBYSHEV

Excellence Scholar 2011 – Computer Science

Source: Nikolay Kobyshev

Nikolay Kobyshev studied computer science and economics in St.Petersburg before coming to ETH Zurich for his Master's degree in computer science. After a year in Zurich, he joined the ETH Entrepreneur Club, where he was responsible for public relations at HackZurich, the largest programming competition in Europe. Since 2016 he has also worked as a consultant for the software company Spectando. Following his doctorate, he founded Assaia International AG at the beginning of 2018 together with two business partners. Since then, as Chief Technical Officer (CTO), he has been responsible for the development of technology solutions in the area of computer vision. These are used at airports to monitor and plan ground handling reliably and accurately.
www.assaia.com

"When I started getting involved in the ETH Entrepreneur Club, it was almost a start-up itself. I liked this and so it rapidly became clear to me that I wanted my own company one day. I was able to acquire the necessary technical expertise for this during my doctorate. There I learned to examine different ways of solving a problem, to remain critical and to discard unsuitable solutions immediately so as not to waste time on them. This experience helps me every day in my work today.

In a small start-up, each day is very intense and you never know what it will bring. New challenges arise anytime and anywhere, so it's very difficult to plan ahead. On a typical day, I spend two to three hours discussing technical problems with my employees, three to four hours trying to solve everyday problems such as secure data transfer, and if I'm lucky, I'll spend a few more hours developing a new computer vision code.

Running your own company is an incredible learning experience.

The technical part is the simplest - that's what you learned at ETH Zurich. But I'm always amazed at how much psychological knowledge I acquire every day –through contact with both customers and employees.

Almost my entire social life revolves around ETH Zurich. Most of my friends are former fellow students and both my doctoral supervisor and a postdoctoral student are involved as consultants in my company.

My decision to do a Master's at ETH Zurich was undoubtedly the most important step in my life so far. Without this step I would never have learned so much and met so many interesting and important people.

My goal in life is to achieve happiness and wisdom. For the next two to three years, however, the plan to successfully build up my company will suffice."

PAULINE BÉZIAT

Excellence Scholar 2017 – Environmental Sciences

Source: Pauline Béziat

Pauline Béziat founded ArtSci during her studies together with two friends (both also students at ETH Zurich). ArtSci's aim is to present science artistically in a way that makes it easy to understand. To this end, ArtSci organised a two-week exhibition at ETH Zurich in spring 2018 called "La Rencontre". 35 scientists from Switzerland, Germany and the USA exhibited their works there. Inspired by the success of the exhibition, Pauline and her team would like to repeat the event in spring 2019. You can find out more about ArtSci on the following website: www.artsci.ethz.ch
That Pauline herself is also a talented artist is testified by her blog: www.paulinebeziat.tumblr.com.

"I love colours and art in general and am fascinated by images that tell a story without words. Last summer, in Nature Geoscience, I discovered a hand-drawn 'sketch-up' article that completely summarised a scientific article about the plate tectonic process of subduction. I found that incredible. Together with two other students I wanted to discover more about ArtScientists and give them a platform to show their work. That was the spark for ArtSci.

I find it fascinating when pictures convey specialist knowledge without the viewer having to have a great deal of prior knowledge. An ArtSci illustration is really successful if everybody looks at it and regardless of their previous education and language skills is able to 'read' it.

I'm already preparing for the ArtSci exhibition next spring. But first I'm flying to Boston and doing an internship in the Biogeochemistry of Global Contaminants group at the Sunderland Lab in Harvard. There I'll be working on a project on the bioavailability of (methyl)mercury in coastal waters. I'm very much looking forward to this! I'll certainly come back to Zurich with a lot of new inspiration for ArtSci@ETH2019.

Without the Excellence Scholarship, I wouldn't have ended up here in Zurich. The scholarship has given me two years in Zurich during which I can learn so much, discover so much and grow with new challenges. My extracurricular commitment is of course very time-consuming.

But I don't think you sacrifice time for a passion. Maybe it looks that way from the outside, but a real passion is a gift

– and as they say so nicely, you can't refuse presents. As long as I can combine studies and ArtSci and have fun, it's good. At my home in Northern Germany there's a saying: 'It's only a storm when the sheep have no more curls'. It's never come to that before."

Stella Schieffer studied civil engineering, specialising in construction and traffic systems. A study visit to a logistics centre was significant for Stella and a fellow student: they wanted to set up a decentralised logistics system that exploited existing traffic flows or commuting routes for the transport of goods and thus reduced empty trips – and so the idea for BringBee was born. BringBee went online at the beginning of 2013. On this website, customers could select and order smaller items from an IKEA catalogue. Other customers who also bought from IKEA and lived in the customer's neighbourhood acted as carriers. For a small fee, they also packed other people's purchases into their car. But what sounds impressive hasn't worked (yet): after two years BringBee had to give up because the necessary growth did not materialise. Today Stella works as a product manager at Google.

"Basically, I still believe in the BringBee concept as a contribution to the sharing economy. Looking back, I see that a lot of things worked well: we had satisfied customers, won several entrepreneur prizes and were able to establish partnerships with various companies in Switzerland. But it's simply very challenging to set up an entire system where the incentives for buyers, bringers-in-arms and retailers are large enough and the necessary volume is generated.

Of course, it takes courage to start your own company. But it's worth it.

If you have an idea of which you are really convinced, you should definitely dare to set up a start-up.

For me it was an extremely instructive time; there aren't many ways to learn as much in such a short time as when you start your own business. I had to understand every process and was responsible for all decisions – from logo design and marketing campaigns to clarifying financing and legal issues to negotiating with potential partners. I learned to act pragmatically, quickly and without perfect knowledge, and became a generalist. It was like studying economics (and a bit more), which I quickly completed.

Without my start-up experience, I wouldn't have my current job either. I moved from entrepreneurship to product management at Google. The way of thinking and the breadth of the scope are basically the same in both cases. Today, as part of Google Calendar, I'm developing new features for more efficient space management at Google."

THE EXCELLENCE SCHOLARSHIP THRIVES ON YOUR COMMITMENT

THANK YOU

The Excellence Scholarship is supported by more than 3,700 Alumni and friends of ETH Zurich, as well as the following partners:
Adrian Weiss Stiftung, Amman Group, Avaloq, Basler & Hofmann, BKW, Bühler, Bühlmann-Kühni Stiftung, CA Indosuez, Clariant Foundation, Dätwyler, Dectris AG, Disney Research Zürich, DMSP Portmann, Dow, Dr. iur. Jstvan Kertész Stiftung, EBP Schweiz, Franke, Gamil-Stiftung, Gemeinnützige Stiftung Basler & Hofmann, Google, Gruner, GVM, Green Leaves Education Foundation, Hardturm AG, IMG Stiftung, Implenia, Josef P. und Nelly Spiess-Mohn Stiftung, Leoni, Monique Dornonville de la Cour-Stiftung, Novartis Stiftung, Open Systems, PwC, RMS Foundation, Rütli-Stiftung, Sensirion, Shell, Starr International Foundation, Stavros Niarchos Foundation, tibits, upc, Yvonne Lang-Chardonnens Stiftung

A donation to the Excellence Scholarship can be made in a number of different ways. Peter Frauenknecht and Florin Iten have come up with two particularly original ways of donating:

"A birthday party, wedding anniversary or service anniversary is almost always associated with gifts. At my retirement party, however, it was important to me to pass something on to the younger generation instead of receiving gifts myself. The Excellence Scholarship offered the perfect opportunity for this. Studying at ETH Zurich was essential for my successful career in IT, and it also opened many doors for me. The fundraising campaign for the Excellence Scholarship carried out at my celebration benefits young talents and gives them the necessary freedom for their studies. My guests were able to fulfill my heartfelt wish and do something worthwhile at the same time."

Peter Frauenknecht, ETH Alumnus

"Last April I was once again a guest at the annual Meet the Talent at ETH Zurich. At this occasion, the ETH Rector and patron of the Excellence Scholarship, Sarah M. Springman, and the ETH Zurich Foundation thank the donors for their support. As an enthusiastic donor, I welcome the opportunity to get to know the scholars and exchange ideas directly with them. At this year's event it was a particular pleasure to be able to support the Excellence Scholarship twice. I first appealed to former Excellence students to make a donation to future scholarship holders by SMS; I then doubled every franc donated, according to the motto 'Make one into two'.
Promoting the next generation of talent at ETH Zurich today is important to me. I also believe in the idea of giving back. I'm delighted that so many young people have taken part in the campaign."

Florin Iten, ETH Alumnus

"I love the word 'excellence' because it says a lot about Excellence Scholarship holders. Not only about what they've achieved so far, but also about what we expect from them in the future – namely best performance. The Excellence Scholarship gives us the opportunity to bring these outstanding students to ETH Zurich or to retain them as Master's students here. This would not be possible without the active support of private donors, because the Excellence Scholarship is financed entirely by donations. Many thanks to all of you!

In order to attract the 50 best talents to ETH Zurich next year, we're still dependent on private contributions. I'm particularly pleased that around 40 former scholarship holders now support the Excellence Scholarship themselves; this helps to ensure that young talents can continue to benefit from the funding programme in future."

Professor Sarah M. Springman, Rector of ETH Zurich and
Patron of the Excellence Scholarship

OUR SINCERE THANKS

to former Excellence students who are helping ensure that the programme continues:
Elena Arcari, Eva Avilla Royo, Tessa Bieri, Raphael Bigler, Olga Diamanti, Louis Du Plessis, Tamara Eicher, Marianna Farmakis, Simone Fasciati, Aryeh Feinberg, Jessica Genta, Philipp Good, Baris Güç Merlin Incerti-Medici, Simon Jermann, Anna Kalinina, Bokyung Kim, Luka Manola, Julian Marschewski, Gabriella Matalin Török, Martin Mosteiro Romero, David Mzee, Annika Oertel, Helen Oleynikova, Maren Peter, Andrei Poenaru, Pietro Rossi, Mauro Salazar Villalon, Martin Sarott, Enrico Scoccimarro, Jérôme Sieber, Gabrielle Siegrist, Nemanja Skoric, Animesh Trivedi, Peter Vogel, Martin Wettstein, Xiaojing Zhang

IMPACT REPORT
EXCELLENCE SCHOLARSHIPS

2018

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