

PERSONAL REPORT

by Konrad Lotter, August 2017

I was delighted to get the chance of doing a six-month internship at Camlin Technologies in Zürich. After being more than halfway through my master's course in Technical Physics at Vienna University of Technologies I felt ready to acquire a bit of hands-on experience and to utilize the knowledge from my studies.

Camlin Technologies Switzerland is originally an ETH-spin-off and does R&D work for the Northern Irish Camlin Group. The goal is to produce tuneable semiconductor lasers (VECSELs), which are then intended for gas detection and various other purposes. As the used IV-VI semiconductors are rather new materials and not very well characterized a lot of research has to go on before the final product can be released.



The city centre of Zürich behind the Limmat River (Photo by the author)

My tasks were to measure the thin semiconductor layers in a photoluminescence and in a transmission setup having to handle liquid nitrogen and a vacuum system in the process. In addition I also treated and analysed the acquired data, correcting for inaccuracies of the measurement setups and getting the relevant data out of the measured IR spectra. The field in which I probably learned the most new things was scientific programming in *Octave*. Although I had lectures and limited experience on this topic I had never done anything on a scale as large as at Camlin before. I was very pleased to develop scripts for the semi-automatic correction and analysis of the measurements, which will certainly be among the things my colleagues can profit from way after the end of my internship.

The pinnacle of my working experience at Camlin was the very warm and collegial atmosphere between all employees. Not only did I have a good and personal relationship with colleagues as well as supervisors, but I also developed close friendships with different colleagues playing billiards or board games after work.

Being Austrian and coming from Vienna I was not really challenged to adapt to living in Zürich. Even if Swiss German is almost a language of its own I had no large problem understanding it and the way of life in Zürich is similar to Vienna in many ways. Only looking at the raw facts (400 000 inhabitants) you would not expect Zürich to offer the attractions of a large city, but it is the centre of life for a lot more people and really an international and thriving city. Never before did I hear so frequently people speaking English in public transport or trains illustrating the huge number of expats and foreigners that make Zürich a really diverse city with a superb quality of life.

Probably one of the first facts that come to mind when talking about Switzerland are the extremely high price level and the enormous costs spending time in this country will cause. Therefore I was obviously a bit worried over the financial side of things and whether I would be able to sufficiently cover my living costs. After a stay of six months involving lots of travelling around and other expenses I am even left with a small addition to my bank account. Prices are high in Switzerland, but so are wages and I doubt that you will find many interns outside of this country being paid the same sums. So I can tell all people coming to Zürich to rest assured about this topic as a not too extravagant lifestyle will be easily affordable.

There is no better way of discovering a country than living there and I think for Switzerland this is especially true. On the one hand many large cost factors are significantly cut, when you are on a long term stay (e.g. being able to buy a half fare card for trains). On the other hand Switzerland offers many fascinating places diverse and unlike each other and almost all of them are in easy reach of Zürich, probably the most significant transportation hub in the country.

I really tried to put my time in Switzerland to good use, usually travelling four weekends out of five and was I to describe all the interesting places, encounters and activities I experienced, this report would probably be enlarged to book size. Therefore I will limit myself to briefly telling about two trips: one I made on my own the other an IAESTE weekend.

Switzerland is famous for its railway lines and sometime in May I decided to follow one of the most prominent trains the Bernina Express from Chur via St. Moritz to Tirano in Italy. Wanting to keep the costs low I did not take the direct train, but opted for the much cheaper regional ones allowing me to ascend and descend at will and to do small hikes in the mountainside. It was fascinating to cross one of Europe's highest train passes still covered in snow and in brilliant weather taking with me lots of photographs and an unforgettable experience.



A train approaching the Bernina pass (Photo by the author)

In the middle of June I attend the IAESTE Casual Hiking Weekend leading me to Europe's most famous mountain triplet of Eiger, Mönch and Jungfrau. We were a group of ten people and I enjoyed many interesting conversations and overall genial company. To any newly arrived trainee I can warmly recommend the IAESTE weekends, which allow you to discover almost the whole country at a very low price and in fantastic and international company.



Our IAESTE hiking group on the way to Kleine Scheidegg (Photo by the author)

At the conclusion of my internship Switzerland, that was previously a blank to me - although bordering Austria - has really grown dear to me and I am already making plans for a short return on one weekend in autumn to visit my friends from IAESTE and at Camlin.