

My wonderful IAESTE internship in Graz, Austria

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Doing an Internship with IAESTE

Doing an internship is an enriching experience. Doing an internship abroad is a memorable experience. Doing an internship abroad with IAESTE is a tremendous experience.

Thanks to IAESTE, going on an internship abroad has never been that easy to me. After applying for several internships proposed by IAESTE, I got selected for a six weeks summer internship at the Institute of Rock Mechanics and Tunneling at the Technical University of Graz, Austria. Once I accepted it, the Swiss IAESTE committee took care of most of the administrative tasks, communicated with the employer, with the Graz IAESTE committee and arranged accommodation for me in Graz. I had a contact person who I could contact any time. This made the preparation of my internship very straight-forward and convenient.

Once I arrived in Graz, an Austrian IAESTE member picked me up at the train station, brought me to the student residence (where I lived during 6 weeks), gave me all the necessary information about Graz and about my work place. He even came with me to my work place the following morning to ensure a good start. I truly appreciated this, because it helped me to get along in Graz fairly quickly.

Throughout my 6 weeks in Graz, IAESTE organized a couple of different events such as international dinner (where one person would cook food from its country), pizza party, board games. Graz IAESTE members always joined us for any of the activities we organized among trainees. It was always nice to have them around and to ask for any information we would require.

Overall, the IAESTE Graz committee overcame my expectations: the organization was irreproachable, the IAESTE members lovely, always ready for any activity, drink, trip and available in case we needed help.

Living in the city of Graz

Graz is a very charming city, filled with culture and history. The charm of Graz lies in the construction style and ornaments of the buildings, reminding of the Vienna style, nevertheless in a more modest way. The red roofs of the city add to the beauty of Graz, especially when seeing the city from the heights. Since Graz is surrounded by hills, the city can be admired on several spots, some of them at only 20 minutes walking from the city center (cf picture on the cover page).

Living in Graz is comfortable: the center is filled with nice bars and student pubs, as well as restaurants at student prices. But this does not interfere with the peace and the quietness of the city. Generally speaking, the people in Graz are lovely: sellers in shops, waiters, administrative employees as well as Austrian citizens. It was heartwarming to enjoy the hospitality of the Austrians I met, the IAESTE Graz committee as well as my work colleagues.

Graz has an optimal geographical situation for exciting travels: Vienna, Innsbruck, Salzburg, Linz, Leoben are in reasonable distances to visit for one weekend, as well as cities of the east-countries: Budapest, Bratislava, Prague, Zagreb and Krakow are also *quite* close to Graz. Besides, Austria has also a lot of nature places to offer: lakes and mountains invite for bike tours, hikes and for breathing fresh air. Unfortunately, my 6 weeks stay did not give me enough time to do such a nature trip, but it encourages me to come back for holidays.

One thing I realized after those 6 intense weeks here in Graz: there are so many trips to do, but so little time.

Working at the Institute of Rock Mechanics and Tunneling at the TU Graz

During my six weeks internship at the Institute of Rock Mechanics and Tunneling, I worked within a research group that investigated on the effect of TBMs (tunneling boring methods) on stresses in rocks as well as on the behavior of reinforced concrete lining segments under different loading types. In this context, using a numerical software, we simulated a reinforced concrete lining segment under radial loading and investigated about the influence of certain parameters on the behavior of the lining segment. Throughout those simulations, we analysed and discussed the output results and draw conclusions about the influence of the loading and material properties on the reinforcement.

In addition to the technical knowledge I gained from working within that the scientific team, I got a good insight into the *research world*. I discovered a different way of approaching problems and facing technical challenges, as well as dealing with uncertainties and unknowns in the engineering field. I also realized the complexity and challenge of research work, and the many parameters involved with the investigation on a particular subject. Although 6 weeks of internship are too short to treat a specific subject in depth, I was quite surprised about the good results we got after this short period. At the end of my internship, we were able to discuss the outputs of the simulations and draw significant conclusions on the crack propagation process in a concrete segment lining.

I certainly value the work experience and technical knowledge I gained from this internship, but I admit that six weeks too short for that kind of work and I leave my work place quite sad about not being able to conclude the research project I worked on during my stay in Graz. Nevertheless, this internship awoke my interest in research and in rock mechanics in general, especially because it is not the field I am specializing in my master degree.

On the last week of my internship, we visited a tunnel construction site and I could see the application of the theory I had worked on during six weeks. This was very rewarding and exciting.



Figure 1: Tunnel construction site visit

Thank you

Even if my six weeks in Graz were not enough to fully immerse myself into the Austrian culture and to complete my research work within the group at the Institute, I fully enjoyed my time here. I spent a wonderful summer in Graz, due to my enriching and interesting work, my work colleagues, the good times spent with the other trainees and the events organized by IAESTE Graz.

I want to thank IAESTE Graz for their constant support and help, IAESTE Switzerland for their prior work and arrangement of administrative task and my cherished colleagues from the Institute who made my work experience interesting and valuable.

I am leaving Graz with a heavy heart, and I will always remember the wonderful time I had here.

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