

EU-CANADA Student Mobility Program: Personal Experience Report

By Sunny Sandhu

When I first arrived in Budapest on January 20th 2010, I felt extremely nervous and lonely. Maybe it was because I was getting over an incredible fever that I had caught during my flight to Budapest from Vancouver and had no one to comfort me or maybe because my taxi driver was speeding all the way to my hotel during extremely slippery conditions. Furthermore, it seemed like all of the buildings were covered in graffiti and that no one spoke English. These little details quickly threw me out of my comfort zone and made me question why and how I had managed to get myself into this position. But as my co-op term progressed and came to an end, I soon became aware that coming to Budapest was one of the best decisions that I had made in my life. I have made many friends, have countless memories and am very content in my decision to take part in the Control and Coordination of Multi-Agent Robotics Systems (C&CofMARS) program.



Snow angels in the courtyard of our flat during my second week in Budapest



Chain Bridge



Amazing Architecture inside the Buda Castle



Buda Castle



Beautiful Budapest in the Spring



A view of the Danube River from Margit Island: my favourite place to go jogging

The Lifestyle

At first, I felt like this co-op experience was going to be a huge hassle because of the cultural and language differences. For example, all of the packaging at the grocery stores, and restaurant menus were only in Hungarian and it seemed like quite an obstacle just to get some food. However, as



My awesome roommates: Ben (middle) and Matt (right)

settlement into Budapest progressed, everything became great. Finding a flat in Budapest was easier than expected. There is a large population of international students there, therefore there are many real-state companies offering flats and the prices are likely to be fair because there is a lot on competition. My flat was located a 20 minute tram ride from BME and I shared it with two other Canadians doing a co-op from the University of Manitoba. The public transportation within Budapest is extremely convenient and is available at every hour of the day.

Also, the tram passes are reasonably priced with the student card and can be purchased easily at any metro/subway station. The co-op and the academic semester at BME began at the same time with an orientation week. During this week, I was introduced to the ERASMUS (European Region Action Scheme for the Mobility of University Students) way of life. This was very significant and caught me completely off guard; I would have never imagined that it could be this easy to make so many close friends in a matter of days. All of us ERASMUS students were in the same situation of being foreign and this allowed us to share the international student experience together. Throughout the entire semester, the ERASMUS society organized countless social events ranging from a casual pub night, to a road trip to Munich, Germany. Among ourselves, us international students organized many social events as well. This aspect of the co-op experience was completely unanticipated, and the incredible memories I have due to the people I met will truly last a lifetime.



One of the Trams we used for everyday transportation



Our Flat in Budapest; located 20 min away from BME via the tram



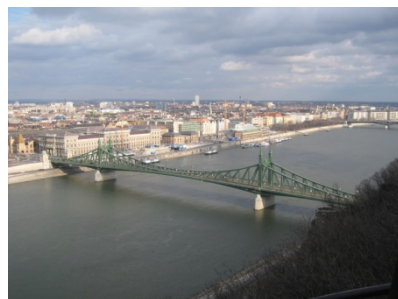
Goulash: Traditional Hungarian Soup



Pizza from one of our favourite restaurants, located only a walking distance away from our flat.



Watching a local club soccer match on one of the weekends that we stayed in town



Sightseeing within Budapest: Gellért Hill

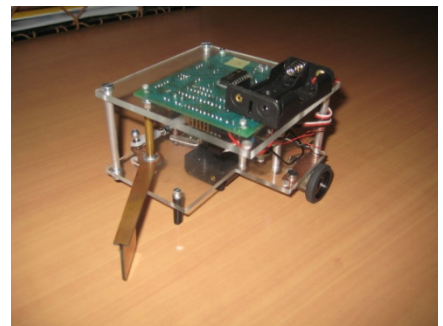
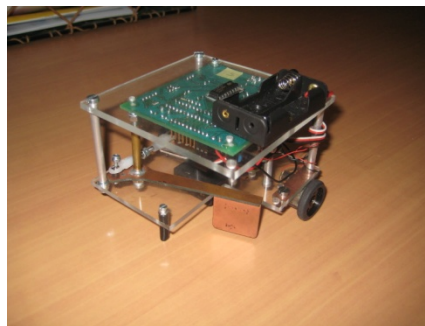
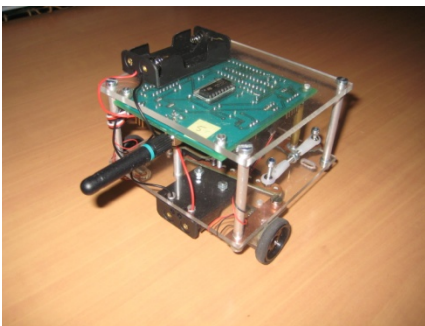
The Work

The work that I completed as a Mechatronic Research Engineer at the Budapest University of Technology and Economics (BME), Department of Control Engineering and Information Technology, was challenging and rewarding. I was supervised by Professor Istvan Harmáti and the work was project based therefore the working hours were very flexible as long as my task was completed on time. The flexibility of the hours occasionally gave me the opportunity to take Fridays off and have three day weekends for travelling to nearby cities and countries.

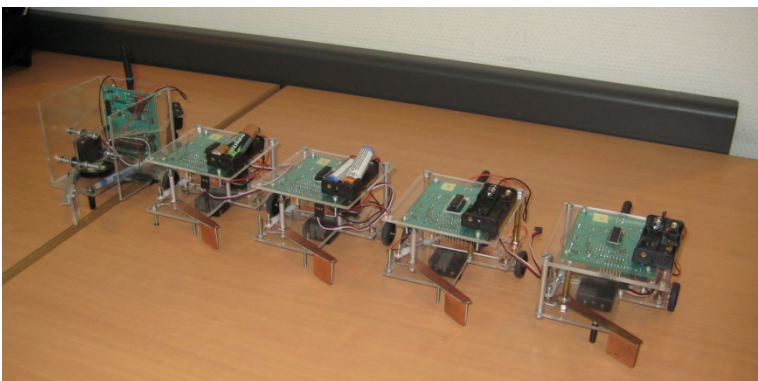


Our building at BME

For the first two months of my co-op work term, my core responsibility was to construct multiple copies of an existing version of a hockey playing robot. This robot was initially developed by a Grad student at BME and by students from SFU who have previously done their co-op work term at BME. My main task regarding this project was to physically construct these robots concerning the mechanical and electrical hardware.



Existing Hockey Playing Robot



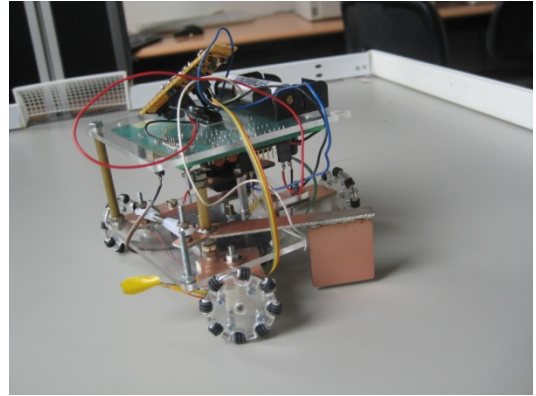
Constructed Robots



Custom made parts

During the last month of my work term, my task was to help my colleagues physically construct a newly designed version of the hockey playing robot. Their new design involved a three wheel omni-directional drive system.

Regarding these projects, my main responsibilities involved trouble-shooting and developing electrical circuits, mechanical construction of custom parts and assembly, and using Computer Aided Design software.



Newly designed omni-directional robot

At first I was challenged because I was not familiar with the tools and machines that I needed to use during the construction. Also, the limitation of tools, equipment and parts was a challenge. All these issues were resolved by experience and by being creative and innovative in the design procedure.

My technical skills have considerably increased due to this work term, and I have notably furthered my hands on/practical knowledge relating to the electrical and mechanical parts of Mechatronics. Regarding electrical engineering, I furthered my Printed Circuit Board development and trouble-shooting skills. Regarding mechanical engineering, I furthered my knowledge concerning mechanical design and mechanical construction of custom parts and assembly. I gained all of these skills during the construction of various types of hockey playing robots. Furthermore, due to the project based work, I have improved my organization and planning, time and project management skills and have become more creative and innovative.



From left to right: Andy, Professor Istvan Harmati, myself, and Cam. (Andy and Cam designed the new omni-directional robot and were the other two Canadians from the University of Manitoba that were taking part in the C&CofMARS program)

In addition to the co-op, I took a Hungarian Culture course which was very informative about Hungarian history, food, literature, music and other topics concerning traditions.

The Sightseeing

Due to the extremely central location of Budapest, it was very convenient to travel to nearby cities and countries. Transportation via trains, buses and planes was fairly priced and readily available. While my stay at Budapest, I traveled to the following places:

Brasov, Romania:



Bran Castle (also none as the Dracula Castle)



Peles Castle

Bratislava, Slovakia:



Bratislava Castle



Souvenir shopping on a cold, but beautiful day



One of the many statues in downtown Bratislava

Eger, Hungary:



Tour of the very significant fortress of Eger

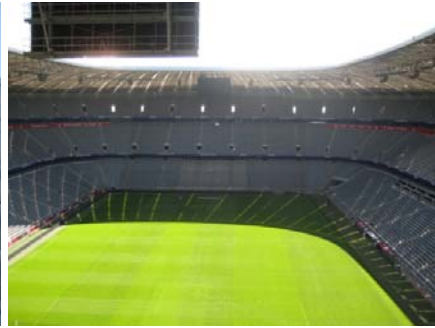


Tasting the famous wine of Eger



Winery tour

Munich, Germany:



Allianz Arena



BMW Museum



Beer Garden



Neuschwanstein Castle

Krakow, Poland:



Downtown Krakow



St. Mary's Basilica



Memorial for the late Polish President Lech Kaczyński



Auschwitz Concentration Camp

London, England:



Big Ben



Tower Bridge



The London Eye

Mykonos, Santorini and Athens, Greece:



Acropolis, Athens



Mykonos



The 1896 Olympic Stadium, Athens

Conclusion

The EU-CANADA Mobility program allowed me to successfully complete my goal of spending a semester abroad and the work I completed at BME strongly complemented the theory discussed in my courses at SFU. This opportunity also gave me the chance to make many amazing friends and allowed me to learn about many fascinating cultures. Thank you Dr. Shahram Payandeh and Professor Istvan Harmáti for allowing me to take part in this program, my experience was truly priceless.