

International Experience: From 0 to 6 Foreign Countries in 9.5 Weeks

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I. International Experience

Universitat Politècnica de Catalunya (UPC)

Execution Prediction en español

The Barcelona Supercomputing Center (BSC) is an associated part of UPC. While at the BSC we were fortunate to be stationed with the developers of *Dimemas* and *Paraver*, two tools that we had been working with for a while and interested in using for our stay. We were able to learn a lot from them, as well as a lot about them. Throughout our stay, they asked us on multiple occasions what we would like to see improved in their tools, during their passionate meetings/arguments regarding the development of the tools. When we needed help with the tools, they were always happy to assist. They were curious about our usage goals and willing to set aside time to help us.

This also gave us a valuable lesson in the lifestyle of a Spanish employee. They certainly did not meet the stereotype of taking excessively long lunch breaks and *siestas*. However, they did seem more concerned with enjoying their lives than the typical American. Their lunch sessions were never less than an hour, and they always went in groups. There was also at least one social coffee break per day.



MareNostrum

As part of our stay, we received a full tour of the former chapel that is now the holding grounds of *MareNostrum*, the 10,000+ CPU super computer, currently the largest in Europe. Yes, that's right a former chapel! The story behind this is that the chapel used to be part of an all girls' catholic school. One the school was closed, the buildings and land were given to UPC. A priest was brought in to "de-holy" the chapel so that it could be used for other purposes. It was used for classes and meeting rooms until the BSC was looking for somewhere to install its new monster machine. Now, you can find over 10,000 processors sitting in what was once the sanctuary; no doubt, this machine is highly thought of.

Some other cool facts were:

- Each rack is enclosed in a glass chamber, with a dedicated push-pull cooling system.
- All the spent air is pushed out to the atmosphere outside.

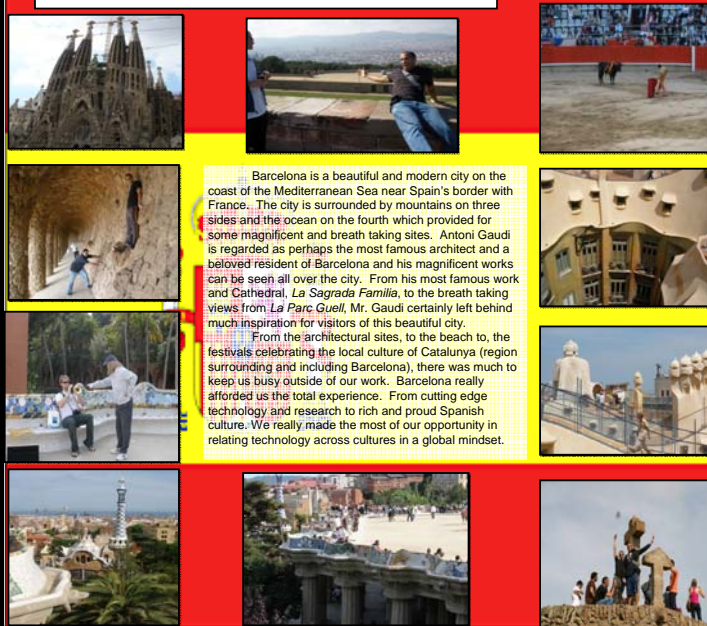


Campus Life

UPC is considered large by European standards, although it is small in comparison to many US universities including FIU. The campus life was quite interesting and very Spanish. Coffee/wine/beer socials were common place throughout the day. In fact, *cerveza* (beer) was cheaper in the vending machines than water. Yes, that's right, they served beer in the campus vending machines for a cheaper price than bottled water!

Midday was a common time to see students and construction workers sprawled out on the grounds in *siesta*. However, this was not the custom of the university employees. In addition, it was much to Marlon's relief that most all of the BSC staff spoke English.

La Vida en Barcelona



Barcelona is a beautiful and modern city on the coast of the Mediterranean Sea near Spain's border with France. The city is surrounded by mountains on three sides and the ocean on the fourth which provided for some magnificent and breath taking sites. Antoni Gaudi is regarded as perhaps the most famous architect and a beloved resident of Barcelona and his magnificent works can be seen all over the city. From his most famous work and Cathedral, *La Sagrada Familia*, to the breath taking views from *La Parc Guell*, Mr. Gaudi certainly left behind much inspiration for visitors of this beautiful city.

From the architectural sites, to the beach to, the festivals celebrating the local culture of Catalunya (region surrounding and including Barcelona), there was much to keep us busy outside of our work. Barcelona really afforded us the total experience. From cutting edge technology and research to rich and proud Spanish culture. We really made the most of our opportunity in relating technology across cultures in a global mindset.

From 0 – 6 foreign countries in 9.5 weeks

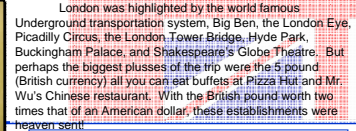
"You only live one time!" was the unofficial motto of the PIRE student's flat. From Spain, to Italy, Portugal, France, Germany, and England, we definitely made it a point to get out and about on the weekends and take advantage of the convenient location that the PIRE program put us in. However, it is important to note that our extra-curricular travels were **NOT** supported by the PIRE program, but we do encourage all who take part in this program in the future to make the most of their time away from the States. But do watch out for the exchange rates, they tend to hurt a bit these days! While we worked extremely hard away from home, we, also, made a point of playing pretty hard as well. However, as any good researcher would do, you never go anywhere without two things: your laptop and your passport (and in that order!)

By plane, train, and bus, the PIRE Barcelona team was able to cover a grand total of six countries in 9.5 weeks of weekend backpacking trips. However, while taking in the sites, it was common to see the PIRE students in an internet café or the Hostel lobby keeping tabs on the experiments and developments our research.

France/England

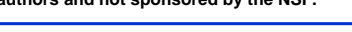
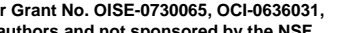
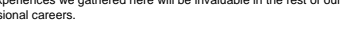
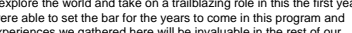
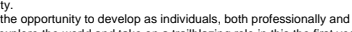
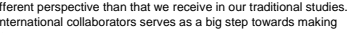
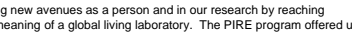
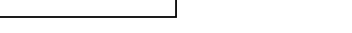
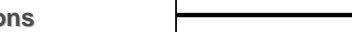
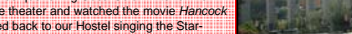
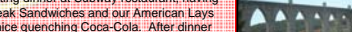
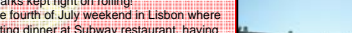
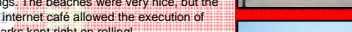
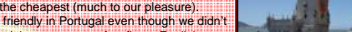
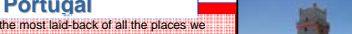
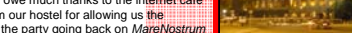
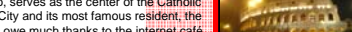
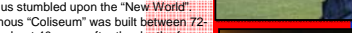
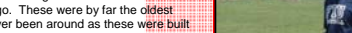
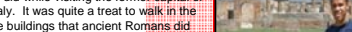
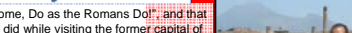
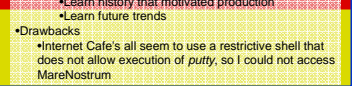
"Bonjour!" and "Top of the day to you!" from two of the major European capital cities, Paris and London. These weekend destinations consisted of your typical backpacking site-seeing activities sprinkled in with some benchmarking and a whole lot of picture taking. Paris was highlighted by the Eiffel Tower, the Arc de Trioump, the Louvre, the Mona Lisa, the Cathedral of Notre Dame, and delicious French bread and pastries.

London was highlighted by the world famous Underground transportation system, Big Ben, the London Eye, Picadilly Circus, the London Tower Bridge, Hyde Park, Buckingham Palace, and Shakespeare's Globe Theatre. But perhaps the biggest plusses of the trip were the 5 pound (British currency) all you can eat buffets at Pizza Hut and Mr. Wu's Chinese restaurant. With the British pound worth two times that of an American dollar, these establishments were heaven sent!



Germany

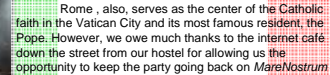
- Very advanced (and confusing) public transportation system
- There are speed limits on the Autobahn
- All automotive enthusiasts should visit Munich, Stuttgart, and Wolfsburg some day
 - Learn how cars are made
 - Learn history that motivated production
 - Learn future trends
- Drawbacks
 - Internet Cafe's all seem to use a restrictive shell that does not allow execution of *putty*, so I could not access *MareNostrum*



Italy

"While in Rome, Do as the Romans Do!", and that is certainly what we did while visiting the former capital of the world, Rome, Italy. It was quite a treat to walk in the shadow of the same buildings that ancient Romans did over 2,000 years ago. These were by far the oldest buildings we had ever been around as these were built long before Columbus stumbled upon the "New World". In fact the world famous "Coliseum" was built between 72-80 A.D. That's only about 40 years after the death of Jesus Christ!

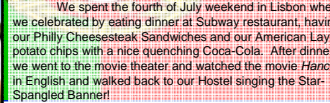
Rome, also, serves as the center of the Catholic faith in the Vatican City and its most famous resident, the Pope. However, we owe much thanks to the internet café down the street from our hostel for allowing us the opportunity to keep the party going back on *MareNostrum*.



Portugal

Lisbon was the most laid-back of all the places we visited. It was, also, the cheapest (much to our pleasure). Everybody was very friendly in Portugal even though we didn't speak Portuguese and there were very few fluent English speakers. Lisbon was characterized by its cobblestone streets and its quaint buildings. The beaches were very nice, but the water was cold. The internet café allowed the execution of *putty* so the benchmarks kept right on rolling!

We spent the fourth of July weekend in Lisbon where we celebrated by eating dinner at Subway restaurant, having our Philly Cheesesteak Sandwiches and our American Lays potato chips with a nice quenching Coca-Cola. After dinner we went to the movie theater and watched the movie *Hancock* in English and walked back to our Hostel singing the Star-Spangled Banner!



Conclusions

To sum up, our experience was about developing new avenues as a person and in our research by reaching across cultural boundaries to really experience the meaning of a global living laboratory. The PIRE program offered us a unique opportunity to take on technology from a different perspective than that we receive in our traditional studies. Furthermore, forging working relationships with our international collaborators serves as a big step towards making breakthrough contributions to the research community.

Beyond the walls of research, PIRE afforded us the opportunity to develop as individuals, both professionally and personally. We were given the opportunity to really explore the world and take on a trailblazing role in this the first year of this program. As some what of guinea pigs, we were able to set the bar for the years to come in this program and were ambassadors for our home institutions. The experiences we gathered here will be invaluable in the rest of our academic careers as well as our subsequent professional careers.

II. Acknowledgement

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