

Ich Lebe Gern in Oldenburg

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Coming from Manhattan to Oldenburg, a very small city surrounded by farms, lakes, and forests, was a drastic change. Gone were the skyscrapers, the traffic, and the noise of the big apple. I missed them, not a little, but a lot, during my first week. That I adapted so well to my new environment was due to the welcoming spirit of the people I met, my neighbors, and, above all, my coordinator.

At the beginning of my internship I didn't know any more German than the survival words of a vegetarian: kein Fleisch, kein Fisch, and kein Geflügel. This was not an obstacle, however, given the friendliness of the people I met. Being a mild soccer fan, the Euro 2008 soccer championship brought me and most of my neighbors together for almost every night of June. German, English, Spanish, and even Italian could be heard at one point in the common living room. We understood each other, most of the times, and our misunderstandings only led to good laughs.

One of the things that impressed me the most about Germany, and Europe in general, was the many languages people spoke. At the research group where I carried my internship, I met other interns from France and Finland who fluently spoke more than two languages. Most commonly, people spoke German and English. Nevertheless, I was humbled by such (good) knowledge of other tongues, even more so by the fact that this was more of a standard than an oddity.

Speaking of things that impressed me, there is Germany's recycling program. It was not an overly complicated system, but it definitely took me some time getting used to. I was once in charge of taking out the trash of the common kitchen and I think I asked my neighbors more questions regarding where the trash goes, than I asked my coordinator about the physics problem I worked on! Nevertheless, I was surprised by the level of environmental awareness and I gladly took with me some of these recycling habits.

Oldenburg was such a small city that most of the people moved in bikes rather than cars. This is one of the reasons I could not find much traffic.

During my first few days in Oldenburg I moved around using public transportation, i.e. the bus. I was surprised buses run on schedule. If the bus stops at, say the University, every fifteen minutes, you rarely catch one arriving sooner or later by more than one or two minutes. Taking the bus was not of my advantage, however, since I lived in a rather secluded place (at a twenty-minutes walk).

My main medium of transportation became an old rented bike that made all kinds of sounds. This was a special bike, however. It gave me the wings and the freedom I needed to explore every corner of Oldenburg. With my bike a typical week day transformed from *home - university - home*, to *home - university - some place else - home*. Where *some place else* varied from the city center, to one of the big lakes, one of the many parks and forests, or simply a ride through town.

When I was not discovering new places with my bike, I could usually be found at the institute of physics at the Carl von Ossietzky University of Oldenburg. With my coordinator, Oliver Melchert, we studied the properties of an original problem, negative-weight percolation of string-like objects. I did not know much about the problem when I started the internship, neither did I have knowledge of C, a programming language, or how to carry computer simulations. At the time, statistical physics and phase transitions were as foreign to me as I was to Germany.

The way we managed to change this to the point I could carry research on the problem was unexpected to me. If there is one impression, one image that comes to my mind when I think of research in Germany, it is freedom. Before starting the internship I thought I would have a formal introduction to computer simulations, to the theory of phase transitions, and to percolation. I expected this to take place in a class or in the professor's office. Furthermore, I pictured myself working on small tasks directed by the professor head of the research group.

Quite to the contrary, I was free to pursue my education and research mostly on my own. My coordinator and I planned what needed to be learned and what sources it would be ideal to learn it from. In my office, I had a stack of papers from different authors explaining the same problem. Some detailed different techniques than others; some were more analytically-inclined while others were more concerned with the numbers. It was left at my discretion, however, how I would I learn the material, how fast and how far I would like to go. And this is a freedom to which I was not used to. Initially, I think I visited my coordinator's office perhaps too many times. This was not the case after the first few weeks though; I was learning to be more academically independent.

This freedom was also present in research. After we found interesting

properties to investigate, it was left to me how to gather the data, to create my own analysis programs on my favorite scripting language (perl), and to analyze the results. So, along with the other PhD students with whom I shared the office, I was truly carrying original research. I could not have asked for something better.

Yet I was given something even better. And this was the opportunity to participate in the intellectual process that leads to research; the spark that generates the questions. The goals we set to accomplish were not on the table when I arrived. Rather, they developed from curiosities and discussions with my coordinator. From publications, we would also get new ideas, new properties to look for in this new problem. Sometimes ideas led nowhere and took with them days of simulations and analysis. Most of the times, however, there was something new that we found, some different exponent we determined.

I don't think all internships are such a great source of intellectual growth. In my case, I think my coordinator had much to do with it. Not only did he welcome me like an old friend and made sure I was comfortable in my new environment, but he always had something new to show me, something new we could work on. Even towards the end of my internship, there were simulations to be run, results to be obtained, and explanations to be put forward. As a result, the bonds we established during the short period of ten weeks have extended to the ensuing months, as we continue to work on the problem with the aim of publishing our results.

I hope it is evident how much I enjoyed my internship in Germany. The small city of Oldenburg will forever have a place in my memory and my heart. I built strong bonds to my coordinator and other PhD students as well as establishing important connections to professors. I learned much about computer simulations from a leading group in the field, as well as about statistical physics and percolation. More importantly, I was given the freedom to carry research on an original problem. It is no wonder then that I'll be applying to master programs in Germany next year.