

# Final report

Internship abroad

## Personal data and general information on the internship

Subject of studies: Mathematics

Bachelor/Master/State exam: Master

Time of internship: 15/12/2023 -14/04/2024

Place of internship: Copenhagen

Internship institution: Niels-Bohr Institute, University of Copenhagen

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## Planning and preparation

The idea of spending a year doing research abroad was always one of my priorities when I started my Masters at LMU. I knew that I would eventually want to do a PhD and that it would be very useful to have relevant research experience and some publications to show the selection committees that I have the academic credentials and knowledge to do a PhD, as demonstrated by my coursework, and that I know how to independently develop a research idea and project, write a scientific publication, and present my work to peers and colleagues, as demonstrated by the research internship.

To find my internship, I carried out an extensive search for research groups that matched my interests and contacted their Principal Investigators. You will not get a response from all of them, some will not have the time to guide you properly and with others the topic or other things may not be an ideal match, so it definitely helps sending a lot of emails. I would recommend keeping the email itself short and to the point. If you can show that you know the research interests of the group you want to do a placement with and can clearly articulate what you would like to work on, this should be enough for the first email. Additional information that is not strictly necessary, such as grades, can be included as an attachment, but if the person you are contacting is interested and needs more information, they will get back to you.

If you know a professor, postdoc or principal investigator from a previous exchange/project or from a lecture, previous projects, work etc. at your home university who is willing to help you find international research, I would definitely

recommend approaching them. They can open doors for you that you would not be able to open on your own.

If you cannot think of anyone directly this is not the end of the world. I also did not organize my internship through any existing connections, but wrote enough e-mails and was lucky enough to get a reply from a professor in Copenhagen, a city and university that I had liked a lot, when I had previously visited it for a summer school. The communication with the professor was very easy and we had several meetings to discuss the research topics of the groups and possible ideas for my time at the institute. During these first meetings it was not yet confirmed that they would be able to host me and that I would accept the position. I think it is very important to go into these meetings with an open mind. I would recommend getting a feel for whether you can work well with your future manager. If they take the time to have a non-binding meeting with you, this is already a good sign, as it suggests that they will be able to take the time to supervise you while you are at the institution. This is particularly important for international research experiences, as you will probably not know anyone else at your host institution at the beginning, so it may be difficult to get help with simple questions and problems because you do not know who to turn to apart from your host. It is helpful to think about issues that are important to you, such as what other commitments you and the professor have that might take time away from the research project or any other things you want to do during your research internship. The Erasmus Learning Agreement that you have to sign with your host is also very helpful in this respect. You can set clear objectives for your time there and define the amount of supervision you will receive from your supervisor.

### **Internship (tasks, typical workday, workload)**

I agreed a very flexible schedule with my supervisor. As my research project did not require any special equipment or lab space and I would be doing most of it on my own, I had a very flexible working day and had no set tasks apart from my research project. There was a weekly meeting with my supervisor, a weekly group meeting, a weekly journal club and a few other departmental meetings and activities that I was expected to attend and, in the case of the journal club, give occasional presentations. I had my own desk in the office together with two PhD students and a PostDoc from the group, which was very helpful to feel integrated into the group

and gave me direct contacts for simple questions and problems. The plan was for me to work 35 hours a week, but this was not strict and I was responsible for structuring my working time in such a way that I would be able to complete my research project by the end of my stay. The flexible working day was great for me as it allowed me to fit Danish lessons and my hobbies into my working day and also occasionally leave early on Fridays or work from home when I had travel plans.

## **Social contacts**

When going abroad for a research project, especially if the start is not aligned with the start of the semester at the host university, it can be hard to meet new people. In contrast to a previous semester abroad during my bachelor's degree, where I had made a lot of friends on the first orientation days offered to international students at the university, I did not participate in any orientation days this time. As a visiting student doing research, I did not arrive at the start of the semester, so I also did not meet so many exchange students. This can be a challenge at first, but in retrospect I think it has allowed me to get to know the city and its people better, as I have ended up making friends with more people who live in Copenhagen. A good starting point to meet other students on exchange can be the Erasmus Student Network (ESN). To my knowledge every major European city has a ESN community that offers activities for exchange students, which I can recommend. I did not go to many events, but the ones I went to were nice. In the end, I met a lot of people through the PhD students of my group, other social occasions and by joining a running club. There are many running clubs in Copenhagen, of which Sparta is the biggest. Sparta organises a lot of big events in Copenhagen throughout the year and I really enjoyed my time there because you not only train with the team you join, but also have social activities such as dinners and training camps. I would also like to give an honourable mention to NBRO, which is a nice community for running & coffee, in my case on Friday mornings.

It seems like everyone in Copenhagen has a sport as a hobby, be it running, cycling or bouldering, and for me it was a very easy way to meet a lot of people with common interests. As a board game enthusiast, I can also highly recommend the Bastard Café.

## Everyday life and leisure

Copenhagen is a very bicycle-friendly city. The public transport is also very good, but I rarely used it because it is so easy to get around by bike. One of the first things I would recommend when you arrive in Copenhagen is to buy a used bike through Facebook, Den Blå Avis [www.dba.dk](http://www.dba.dk) or bike rental companies such as swapfites if you want to be sure that your bike will always work. Apart from that, I would strongly recommend taking up a sports-related hobby or finding communities that share your existing hobbies. As a foreigner in Denmark, you can take Danish lessons free of charge. You need a CPR number to sign up for Danish classes, which you can get by registering with the municipality. This is mandatory and will also give you access to the Danish Healthcare System. The language course I took was at UCPlus. An added bonus was that I got a free Danish SIM card with it, which was very nice, because together with a Danish bank account (I got one at the neo bank called Lunar), this allowed me to get a mobile pay account. While you can use your credit card almost everywhere in Denmark, Mobile Pay is often used to split bills or for smaller shops and events.

## Financing (cost of living, shopping tips)

Copenhagen is a very expensive city and finding accommodation can be difficult. I can only recommend that you start looking for a flat/room as soon as possible. There are many options, of which the Housing Foundation of the University of Copenhagen is definitely one of the most expensive and, in my opinion, undesirable options. On the other hand, it is much easier than finding something through facebook groups or other portals like [boligportal.dk](http://boligportal.dk), where you have to pay a monthly fee to contact landlords. To cover my living costs, I also worked a bit on the side, which wasn't difficult considering the good wages in Copenhagen and the number of vacancies. One thing to bear in mind, however, is that taxes are quite high in Denmark if you earn more than the tax-free amount, so it makes sense to contact [skat.dk](http://skat.dk) in advance to check what regulations apply to you.

## Conclusion

In conclusion, I can highly recommend doing a research internship at the University of Copenhagen and especially at the Niels Bohr Institute. The atmosphere throughout the institute was very welcoming and supportive. Copenhagen is a beautiful city with great museums and other opportunities where you will always have something to do outside of your internship and on weekends. However, it is an expensive city, so it is highly recommended that you start looking for accommodation as soon as possible.