Experience report on ERASMUS internship abroad in Paris

I study Neurosciences (Experimental and Clinical) at the University of Cologne, pursuing my Master of Science degree. Through the Erasmus program, I had the opportunity to do an internship at NeuroSpin CEA Paris-Saclay, specifically in the Cognitive Neuroimaging Unit (UNICOG). I chose France for my internship as it's known for strong cognitive research, especially in temporal cognition, which aligns with my interests. The opportunity to work with advanced neuroimaging techniques and contribute to cognitive research made this an ideal choice for my academic development.

Preparation

I began by researching laboratories specializing in cognitive neuroscience, particularly focusing on temporal cognition research. After careful consideration, I applied to two labs - one in Lyon and another in Paris. The application process involved sending my CV, academic transcripts, and a detailed letter explaining my research interests and motivation. Both professors responded warmly to my applications, but the Paris lab's research focus perfectly aligned with my interests. Following a comprehensive interview discussing potential projects and my research background, I received an invitation letter within approximately two weeks.

The Erasmus grant application turned out to be the most straightforward part of my preparation, thanks to ZIB Med (Zentrum für Internationale Beziehungen Köln) providing very concrete requirements and a flexible timeline. Their clear guidance allowed me to focus on the more challenging aspects of my preparation. The documentation process was well-structured, and they provided detailed checklists that made the application process manageable.

However, as an international student, I faced unique challenges in the preparation process. The most significant hurdle was related to security clearance at CEA (French Alternative Energies and Atomic Energy Commission). Being a high-security research facility, they require extensive background checks for all incoming researchers. What typically takes 1-2 months for EU citizens extended to 4 months in my case, likely due to my non-EU status. This meant that although my internship was originally scheduled to start in February, I couldn't begin until May.

During this period, I also had to navigate the complex process of renewing my German residence permit while simultaneously applying for a French visa. This required careful timing and coordination between different administrative offices. For the mandatory insurance coverage, multiple types were required: health insurance, liability insurance, and repatriation insurance. I researched various options and eventually found a comprehensive 6-month internship insurance package from a French vendor that included all these coverages and met the requirements for both the internship and visa application.

Accommodation

The housing search in Paris, often described as challenging by many, turned out to be surprisingly manageable thanks to Science Accueil. This organization specializes in assisting international scientists with finding housing in the Ile-de-France region, and their expertise was

invaluable. The process was straightforward - I provided them with my budget constraints and preferences regarding accommodation type (studio vs. shared apartment), and they handled the search process.

My accommodation, a studio apartment, cost 610 euros monthly. While this wasn't the most economical option - shared apartments were available for 400-500 euros - I needed to secure housing quickly to complete my French visa application. The location was convenient, with good public transportation connections to both NeuroSpin and central Paris. The apartment, though modest in size, was well-maintained and came furnished with all essential amenities.

Science Accueil also assisted with the administrative aspects of housing, helping me understand the French housing system, including insurance requirements and utility setup. Their support made the transition much smoother than it might have been otherwise.

Internship at NeuroSpin

The research environment at NeuroSpin exceeded my expectations in terms of both academic excellence and collegial atmosphere. Working in the Cognition & Brain Dynamics group under Dr. Virginie van Wassenhove, with direct supervision from Dr. Sophie Herbst, provided an ideal setting for my research training.

My internship began with a comprehensive two-month training period focused on Magnetoencephalography (MEG) data acquisition. This sophisticated neuroimaging technique requires precise protocols and careful attention to detail. Working alongside the lab's research engineer, I learned not only the technical aspects of MEG operation but also the importance of maintaining strict quality standards in data collection. The requirement for two operators during MEG sessions provided numerous opportunities to discuss experimental design and troubleshooting with experienced researchers.

After establishing proficiency in MEG operations, I transitioned to my independent project. This involved creating a pilot experiment from the ground up - beginning with theoretical simulations, progressing through experimental design, recruiting and screening volunteer participants, collecting MEG data, and conducting preliminary analyses. The project allowed me to apply both my theoretical knowledge and newly acquired technical skills.

A particular highlight was the opportunity to present my initial results at the CuttingEEG conference in Nijmegen. This experience not only helped me develop my presentation skills but also provided valuable feedback from the international research community and networking opportunities with other researchers in the field.

Everyday life and free time

The social atmosphere at NeuroSpin significantly enhanced my experience in Paris. The lab culture emphasized work-life balance and collaborative interaction. Our daily schedule included extended lunch breaks (1-1.5 hours) at the CEA canteen, where both professors and lab members gathered for meals and informal discussions. The canteen's affordability, with meals costing only about 3.50 euros, made it an attractive option for daily dining.

Morning coffee sessions were also great, providing opportunities for informal scientific discussions and cultural exchange. These daily interactions helped build strong professional relationships and friendships within the lab. The collaborative atmosphere extended beyond

working hours, with regular social gatherings at lab members' homes, particularly for board game evenings during weekends.

Outside the lab, I explored Paris's rich cultural offerings and scientific community. The city's excellent public transportation system made it easy to visit museums, attend scientific seminars at other institutions, and explore different neighborhoods. The experience of living in Paris while conducting research created a perfect balance between professional development and personal growth.

Conclusion

Reflecting on my nearly 6-month stay (from May 11th to November 5th, 2024), I can confidently say that this internship was a transformative experience, both professionally and personally. Despite the initial administrative challenges, the opportunity to work with cutting-edge neuroimaging technology and contribute to cognitive research proved invaluable. I gained extensive hands-on experience with advanced brain imaging techniques, developed skills in experimental design and data analysis, and had the opportunity to present my work at an international conference.

The lab's welcoming atmosphere and the friendships formed helped me adapt quickly to life in Paris. I'm particularly grateful to the Center for International Relations - ZIB Med for their outstanding support throughout this process, especially in handling the numerous timeline changes due to my bureaucratic hurdles. Their understanding and flexibility were crucial in making this experience possible.

The initial administrative hurdles, while challenging, taught me important lessons about persistence and adaptability in international research settings. These experiences, combined with the technical and research skills acquired during my internship, have significantly contributed to my professional development. I would strongly recommend this opportunity to other students, particularly those interested in cognitive neuroscience research. The key advice I would offer is to start the preparation process early, especially if special security clearance is required, and to maintain open communication with all involved institutions.

This internship has not only enhanced my research capabilities but also provided valuable insights into the international research community and French academic culture. The experience has reinforced my career aspirations in neuroscience research and helped establish professional connections that will be valuable for my future academic endeavors.