

DAAD Rise Summer internship 2023

For three months this summer I moved my whole life to Munich in southern Germany, and I couldn't be happier with how it went. My internship was located in Garching Forschungszentrum, specifically working in the Heinz Maier-Leibnitz Zentrum in the 'Physics with Positrons' research group. My work was very varied with many different tasks and projects throughout the three months, the main one being optimising and redesigning the grip mechanism for a tensile testing machine for different aluminium alloys. This came with complications, since my supervisor wanted the equipment to withstand up to 20kN tensile force with minimal displacement, along with other essential requirements for the set up. I learned how to carry out force simulations on my 3D models and got to grips with many different programs for different aspects of my internship. I find it very fulfilling to know that my model is in the process of being manufactured and will be used very soon for data collection.

A typical day of work would start at around 9am, having taken a half hour bus from my apartment to the work institute. The work group would all go to the Mensa for lunch at around midday, and then we would have coffee together afterwards at the office. My work would depend on the current project; earlier in the internship I was in the lab more often collecting data, and nearer the end of the internship, it resembled more an office job where I was designing models on the computer. By five or six in the afternoon I would head home and sometimes cook dinner with my flatmates, or just relax before another day of work! My impression of research in Germany has been really good - everyone in my work group was very dedicated to their work, and there was real cohesion in the team. The only thing I was slightly surprised by were the really flexible work hours as some people would arrive to work at 10 or even 11am and leave later, or some would arrive super early, depending on their preferences.

My biggest struggle on the run up to the start of my internship was finding accommodation in Munich at a suitable price. My supervisor wasn't able to really help me, so I found myself navigating the hundreds of adverts for spare rooms on www.wg-gesucht.de which in hindsight is a very useful website for finding a free room, but needs to be used properly to have success. I would suggest putting your email notifications on for any new listings in the area of interest, and to send a message to any interesting rooms as soon as you see them, since often people only look at some of the first responses they get. I would also encourage you to look a little outside of the big cities; in my case, Munich was horrifically expensive for renting even a small room, but I ended up finding affordable apartments in Freising, a big town to the north, which still had a direct bus connection to work that I didn't realise until several weeks into my search. In terms of banking, I personally used the HSBC Currency account in the UK, and then transferred this to a Global Money debit card from HSBC on their mobile app, and this worked fine for me. For travelling, I couldn't recommend the Deutschlandticket, which I got for 49 Euros per month, enough – a bargain for anyone living in a big city such as Munich, where it is practically impossible to commute without public transport. Even for my weekend trips to surrounding cities in Bavaria, this was ideal because most of the places I wanted to visit were accessible by regional trains, which essentially meant most of my travel was free! Otherwise, for longer distances Flixbus is very cheap, or if you manage to book early enough (around one month in advance) the Deutsche Bahn high speed trains (ICE) are also very affordable.

Overall, my RISE internship experience has been unforgettable. On an academic level as well as a personal level, I have learnt so much more than I could've hoped for when applying, and I have made so many memories from the three months I spent in the south of Germany. One experience in my internship which I will always remember was the 48 hour straight beamtime in the HZDR centre in

Dresden where I assisted in two 8 hour shifts, helping to change metal samples in the vacuum chamber which were then irradiated with a high energy positron beam. It was my first time in a particle accelerator centre and was such an exciting opportunity. On a personal level, the weekend conference to Heidelberg was amazing because I was able to meet so many other fellow interns from around Germany and listen to different people's experiences in their internships. Hearing how enthusiastic everyone was about their own individual internships and projects made me so excited to pursue a career in STEM.

When I was applying for this internship, I was hoping it would help me decide if I wanted to take on a PhD after my degree. Although I have not yet come to a decision, I can easily say that this experience will inform me so much more than if I hadn't been lucky enough to receive this opportunity. I would like to thank the organisers of this program so much for an unforgettable summer and would wholeheartedly recommend this program to anyone thinking about applying!

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