

Edward Donlon – Bürkert Fluid Control Systems, Dresden

To any graduate student considering applying to the RISE program, I can tell you without doubt that it is a thoroughly worthwhile and rewarding undertaking. From meeting new people to embracing a new culture (or even just as an excuse to get away for a few months), this opportunity to experience research internationally is simply invaluable. So go ahead and apply – you won't regret it!

Personal Background and Internship Details:

First, a bit about me: At the time of applying, I was a first-year PhD student in applied mathematics at Technological University Dublin, Ireland. While looking for a way to gain research experience abroad, I came across an exciting project in machine learning offered through the RISE program by Bürkert Fluid Control Systems in Dresden. After a successful application, this is where I would go on to complete my internship during June-August 2019.

Impressions of research in Germany and of German companies:

The complete production process for the devices that we worked on took place on-site, which meant that the research I was involved in was very hands-on and practical. The benefit of this was that if I ever needed clarification on how a certain aspect of a device functioned, I could easily find this out from an expert coworker in an office down the hall. Everybody at Bürkert was very friendly and welcoming, and any excuse in the office to have the German tradition of coffee and cake was availed of! Being Irish, there were some small cultural nuances to adjust to, such as shaking hands with coworkers upon arrival in the morning, but quickly I felt at home and part of the team.

Particularly interesting aspects of your research:

What really engaged me about my research was how readily applicable and focused the project was. My supervisor had a concept that he felt was achievable, and once I arrived we got to work straight away on implementing it. Being able to conduct some research on an interesting topic that was slightly outside the scope of my main PhD research was also a nice change of pace. Additionally, coming from a mathematics department into industry and having the opportunity at Bürkert to work with people from different backgrounds (such as physics and engineering) gave me a new perspective on how to tackle technical tasks from a different angle.



DAAD weekend in Heidelberg (photo credit: DAAD 2019).

Typical internship routine:

Usual working hours were approximately 9-5, although this was flexible so starting or finishing earlier or later was never a problem. At the start of each week, I would talk over upcoming tasks with my supervisor and then each day I would try to make some progress and drop back over if any issue arose. I also had quite a bit of freedom to work on any other aspects of the research problem that I found interesting. I lived with a few local Dresdeners in the city and commuted every day to the company's offices in a smaller town nearby. I would



highly recommend to others to do this (as opposed to living closer to the office), as living in the city means that you can better engage in all aspects of everyday German life.

Highlights of your stay:

On a professional level, getting to present my research findings at the end of my internship not only to our department but also via video link to our other branches in Germany and France was a brilliant experience. I had great fun too meeting the other interns at the RISE weekend in Heidelberg in July and finding out about how their placements were going. Other personal highlights include going to see ALBA Berlin play against Bayern Munich in the Bundesliga basketball finals and a RB Leipzig football match. Located in former East Germany, Dresden itself has a fascinating history, and from outdoor films on the banks of the river Elbe to its numerous city festivals there was never a shortage of things to do. As Germany is such a culturally rich country, I would highly encourage everyone on the program to travel as much as possible during his or her time there!

Advice for incoming interns:

- For banking, use N26. They are one of the few German banks that let you sign up online with a foreign address and the whole process on their app takes only about 10 minutes.
- Accommodation can sometimes be difficult to find, particularly in the big cities, but your host company will usually provide good advice in terms of finding housing close to the company. I would strongly recommend putting a full and detailed wanted ad (really show your personality) on "WG gesucht" for a room in a WG (German flat share) as soon as your internship is confirmed. Send out some messages and be prepared to do a Skype interview!
- Get a "Probe BahnCard 25", which offers a 25% discount on train bookings with Deutsche Bahn. It will pay for itself - just make sure to read the fine print and cancel it on time before renewal!
- Your usual university student card will more than likely not be widely accepted for student discounts, so sign up for an International Student Identity (ISIC) card before you come over.
- Give yourself a go speaking the language! Your coworkers will appreciate your efforts and DAAD even offer a further stipend for attending a language course during your internship.

"I agree that my report and accompanying pictures may be used by the DAAD in printed materials, presentations, and on websites in order to inform funding organizations, sponsors, and students about the RISE program."