Leonardo Industrial Placement

Calum Maitland
Heriot-Watt University

December 5, 2019

I took a break from my PhD for an industrial placement at Leonardo MW in Crewe Toll, Edinburgh from September to November this year. Leonardo MW Ltd are a major international company in the defence and security sector; the Edinburgh site contributes towards the development of state-of-the-art sensors.

My role was a radar Systems Engineer, working in applied research. This involved analysing radar data recorded from a recent flight trial, which was quite challenging given the lack of synchronisation between the transmitter and receiver, among other factors. The numerical and signal processing knowledge I’ve acquired through my PhD was invaluable here and helped me devise a novel method of isolating reflections of interest. I also carried out a literature review on unwanted signals in this particular radar system and characterised these within the experimental data, developing a model which gives a good qualitative description of them.

Though the topic was unrelated to my usual area of research, my work felt fairly similar to my PhD in many ways. I worked mostly independently but was well supported by other engineers in the applied research team. I’m aware that my three-month, somewhat open-ended project was quite different to the day-to-day tasks involved with highly complex engineering projects. A single radar component may have dozens of people working on it in tandem, often liaising with several other teams on technical problems within very tight deadlines. The time spent around my colleagues has given me an appreciation of this, as well as industrial radar engineering more generally.

Overall I feel my placement went well. I enjoyed applying my skills in to a different field and liked the working environment at the company. It’s an area where you still get to use physics while developing interesting applications. I would definitely consider a career in this particular industry and look forward to further opportunities to work with Leonardo. I would also strongly encourage other CDT students thinking about an industrial placement to pursue one; besides the additional experience which enhances your CV, it’s a great opportunity to sample work outside academia.