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Daphne Jackson Fellow



DEPARTMENT OF
**ENGINEERING
SCIENCE**

What inspired you to become an engineer?

I have always been fascinated by space and our drive to understand more about the Universe. Growing up, I loved watching science fiction and I enjoyed studying maths and physics, however, I had never considered engineering until it was suggested to me by a Naval Recruitment Officer.

How did you get started in engineering?

I studied electrical engineering at the Australian Defence Force Academy. After a few years, I decided that the Navy lifestyle was not for me. I continued my engineering studies at a civilian university and, after graduation, started working as a radar systems engineer with the Department of Defence.



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What is your research area?

I later obtained my PhD in Astrophysics from the University of Melbourne. I am now based in the Machine Learning Research Group here in Oxford and I develop algorithms and signal processing techniques for radio astronomy data. All of my work, from radar to radio astronomy, has had a strong focus in signal processing, communications and high frequency radio-wave propagation.

What is an average day on the job like?

At the moment, many of my days are based in my office reading papers and running code to explore data. A few times each year I travel to conferences to hear other people talk about their work and to present my own. I also attend many discussion groups and seminars here in Oxford.

During my PhD, I spent time running experiments on large radio telescopes such as the Parkes Radio Telescope and the Australia Telescope Compact Array.

What has been your highest achievement to date?

I feel a sense of achievement every time I present my work to an audience, however, one of my proudest moments was when a very prominent female scientist (and personal hero of mine) came up after a recent talk and congratulated me.

What attributes and skills help you in your role?

Strong skills in maths and programming are very helpful but I believe it also helps to have an inquisitive nature and to think creatively.

What is the best thing about your job?

I love that I get to meet incredible people and to share interesting ideas with them. I am fascinated by the world (the Universe!) that we live in and the patterns that occur naturally around us. The best thing about my job is that I am free to explore all of these ideas.

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Have you experienced any gender-related challenges?

My first post-doctoral contract was prematurely ended just after I returned from maternity leave - I was working in a foreign country at the time. I decided to take a career break and focus on my family.

After a few years, I applied for a Daphne Jackson Fellowship which is specifically tailored for people returning to STEM after a career break. The application process was difficult, particularly as I was still juggling childcare, however it has now given me an amazing opportunity to re-establish my academic career!

What is your top tip for girls considering Engineering?

I would say to be yourself - throw away any pre-conceived notions of what an engineer "should" be like and appreciate that, whatever your style of thinking or approach to work, you will bring new and valuable ideas to the projects that you are working on.

Why should young women choose engineering as a career?

It is a very interesting and rewarding career path which covers a broad range of fields. There are good career prospects in both academia and industry and if, like me, you have an interest in the space industry an engineering degree gives you a definite advantage!

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