



# WHY IT MATTERS...

## ELECTRICAL & ELECTRONIC ENGINEERING



Loughborough University

### Melissa Schiele

#### Research Student

We all watch the news. It's mostly filled with bad news, issues, pollution, geopolitics and the ilk. But what if you learnt to wield the knowledge that you have gained into a solution?

That's how I view myself and my research. I'm a small cog in the network of scientists all over the world. We're all our own person though and we are unique in our research and how we do it.

It can be very intimidating, standing up and saying "this is what I think we should do", but after a while, people start to listen and you build partnerships and teams. I never, in a million years thought I'd have people emailing me out of the blue to ask about my research....asking me for help.

I can now see that there is a need for my research and this is why it matters....people are interested in what I do because it can help them. Fundamentally I traverse two worlds; marine ecology/conservation and waterproof drone engineering. The ocean, which is the centre of my research world, is in dire need of help and there are so many ways a young scientist can contribute to this - from communicating science to non-scientists, using YouTube or podcasts, to mathematical modelling and engineering. This is why I think STEM subjects are so satisfying - they open up so many ways for you to make a difference.



Post 16 Education	Higher Education
AS Level Biology	BSc Hons Geology with Science
A-Level Geology, Environmental Science, Fine Art	Communication
	MSc International Marine Environmental Consultancy
	MSc in Conservation Science
	Now studying for a PhD at Loughborough

**Melissa's advice:** Read, read and read some more. Learn to network and don't be afraid to pick up the phone and talk to people. Be confident and engaged in whatever it is that you love. In this day and age, communications skills are very important and many young starters struggle in this area so start small - call one organisation a week - get an internship somewhere - build up your social media presence - be professional and emulate the person you want to be....and in no time - you'll be that person!"





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### Melissa's experience as a student

Undergraduate university was a struggle for me as I had undiagnosed anxiety and stress issues, which meant I failed to focus effectively (something I'd had problems doing at school, too). I also struggled through my first Masters with the same issues. By my second MSc, 10 years later, I had medication. Now I have support, from my GP and my family.

I guess my advice here is, don't suffer like I did. Reach out if you are feeling out of the ordinary for a prolonged amount of time. The world is more sympathetic and conscious of mental illness now, if you need help, please, never hesitate to find it.

Aside from my personal situation, university opened my eyes to how science works in the real world, what a researcher does day to day and most importantly, it offered a great opportunity to network!

### Melissa's Career

After 7 years or so working in various projects around the world, I decided to follow my passion and come back to sciences as I wasn't feeling particularly inspired in my work and I had always wanted to do a PhD and indulge in research.



I came back to education and went to Imperial to do my second Masters (MSc) which catapulted me into the Zoological Society of London and working on fixed-wing drones for applications in fishery surveillance and marine ecology. Many people jeered at my idea to do a second MSc, but it was exactly what I needed and I'm perfectly on track to where I want to be (and everyone now commends me for making the right choice!).

Now I'm studying for a research degree (PhD) at Loughborough. For me, it's the perfect blend of multiple things I love and am good at.

I couldn't manage a job / research where I focus on one thing - I'm naturally a polymath and pulling things together is one of my strengths. I currently blend tech, design, systems engineering, marine ecology, socioeconomics etc. I like finding [or trying to find!] solutions to the bigger picture issues. My work has direct and relevant application to real-world issues in fisheries management and conservation but also to improving the lives of people in developing nations. This give me tremendous job satisfaction.

**Loughborough University offers BEng and MEng undergraduate degrees in** Electronic and Computer Systems Engineering, Electronic and Electrical Engineering, Robotics, Mechatronics and Control Engineering.