Why are female engineers needed?

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What inspired you to become an engineer?

I was always interested in and good at Maths and Science, so was inclined towards a scientific discipline from a young age. My father is a Mechanical Engineer, so I was exposed to the field from early on.

In primary school, we learned about Roberta Bondar, the first Canadian woman in space and that’s where I became interested in aerospace engineering. Initially, I wanted to be an astronaut, but I thought aerospace engineering was a good backup plan in case the former didn’t work out!

The support and encouragement from my parents and teachers was crucial towards making this decision.

Have you faced any gender-related challenges?

I have been fortunate enough to have never experienced any overt barriers due to my gender, but I do know they exist. The types of barriers I have faced have been subtler, like my idea not being taken seriously in a meeting until a male colleague repeats it. Other subtle barriers include not being assumed to be knowledgeable on engineering topics in networking situations, being talked over, have comments made on my appearance rather than my ideas, etc.

What is your advice for young women starting out in engineering?

You don’t have to be a genius. Just work hard and be honest about your strengths and limitations. Find and hold on to a support network, like friends, family, Women in Engineering or other minority networks.

What is your research area?

My research expertise is in the field of applied computational fluid dynamics (CFD) of jet engine heat transfer, aerodynamics and aeroelasticity. I currently lead the CFD modelling campaign for various projects, in collaboration with industry partners and research groups, relating to various cooling system problems in modern jet engines.

What do you enjoy most about your role?

I enjoy the fact that I get to solve real problems, that often seem so complicated, but once broken down into smaller problems, can be solved more easily. I also love that my research can have a tangible impact on the environmental goals of the aviation industry, like reducing CO2 emissions, and having these new technologies being implemented by our industry partners on their next generation of engines.

What needs to be done to address the gender balance in engineering?

I have found that girls are very much interested in STEM subjects and tend to be intelligent enough. But they encounter the same subtle gender stereotypes in every environment they’re exposed to - home, classroom and media, along with inadequate careers advice from schools.

We need to get parents, educators, toy companies and children's entertainment providers on-board to challenge the stereotypes they convey.

“In love that my research can have a tangible impact on the aviation industry.”