60 Seconds with ... Dr Mike Parsons



Mike has worked for many years in the safety industry across diverse sectors such as Defence, Aerospace, Rail, Healthcare, Nuclear and Government. He has worked for Logica, CGI, NATS, and he is now a research fellow in the AAIP at the University of York working on the assurance of autonomy.

His career started back in 1988 when he worked on medical imaging systems, progressing through projects including space launch tracking systems, satellite navigation, healthcare applications and civil aviation messaging.

He is also the SCSC Director and Events Organiser, and leads two of the SCSC Working Groups on Data Safety and Service Assurance.

You've said before that your childhood dream was to be an astronaut. What aspect of space travel interests you the most?

I think it's the idea of complex systems working in a difficult and unforgiving environment and enabling new discoveries and applications. The idea that the systems in space stations, Mars rovers or deep space probes have to be super-resilient and be able to work autonomously is fascinating to me.

What aspect of your career are you most proud of?

That's easy: building communities of safety engineers to achieve a goal. I did this working at Logica where I created the safety community and also a safety practice; but to me, the SCSC embodies this completely. Becoming Director of the SCSC and running the Safety-Critical Symposium gives me a real buzz! I am really proud of the work I have done on the SCSC Working Groups (Data Safety and Service Assurance) and also at events where we all have a strong common purpose and work together to achieve it. In terms of projects, it would have to be the Ariane launch vehicle tracking and monitoring system I did for Logica and subsequently installing the kit at the launch site in French Guiana.

What advice would you give to yourself age 12?

Follow your dreams, but be prepared to be side-tracked! I think my dream of being an astronaut led me to work in the Space Sector, then in Safety, then for the SCSC. Safety is such an interesting and challenging area: I like the way it requires systems thinking as well as an appreciation of wider things like legal and ethical aspects, together with the constraints of what is possible. I would never have appreciated this as a 12-year-old, but it's important to give your career time to explore: some roles you don't even know exist may suddenly appear. I would also say don't be afraid: reach out and take on something new – you will find a way – and opportunities don't appear twice.

What worries you the most about the future of System Safety?

I am really concerned that our techniques for analysis of complex systems are not up to the job; systems are becoming ever more dynamic and distributed, with vast hidden complexities (and autonomous functionalities). Also, security needs to be properly integrated with safety. I think we need a whole new suite of powerful tools allowing us to reason about these systems. Historically, safety engineering has learnt from accidents. What worries me is that we'll have some terrible accidents (e.g. involving self-driving vehicles) and not be able to work out why it happened...

What's your most favourite quote or motto?

I always liked a saying we used to have at Logica when reviewing risks on new projects "Would it pass the headline test?" In other words, if the system or software developed went wrong and an accident resulted, could you construct a snappy 'tabloid-style' headline blaming us? If you can, then the system is likely not safety engineered enough...

If you could learn to do anything, what would it be?

Learn how to move around in a zero-g environment. Since being an astronaut is still somewhat unlikely, this might have to be done in one of the commercial zero-g flights now on offer. Also I think it would great to dive to the deepest ocean floor in a submarine – anything which takes me to new environments.

If you could be any fictional character, who would you choose?

Possibly Mark Watney from The Martian – I love the way he solved the hard problems while abandoned on Mars. I do like a good detective story, and I think Max Liebermann from Vienna Blood is an interesting twist.

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What's the best piece of advice you've ever been given?

Perversely, "take a risk!" This was explained to me back in 1995 on my first Logica project and is important – safety engineering is all about managing risk, not eliminating it altogether.

Which song title best sums up your experiences with Covid-19?

"*David Sylvian – World Citizen (I Won't Be Disappointed) / Looped Piano Version*" sums up the sense of alienation, isolation and strangeness of the pandemic with a safety theme. I also really like *"Patricia Barber - Icarus (For Nina Simone)"* - I've listened to a lot more jazz over the last two years and this is a lovely example, with a risk and aviation topic.