

60 Seconds with ...

Dr Emma Taylor



Dr Emma Taylor is Head of Digital Safety at RazorSecure, a rail cyber security solutions company, and a Chartered engineer with 30 years' experience across aerospace, energy and transport. She is a Visiting Professor at Cranfield University, a Fellow of multiple Professional Engineering Institutions and holds a number of industry awards e.g. this year's Computer Weekly Top 50 Influential Women in UK Tech.

She is a Past-Chair of the Safety and Reliability Society, and an honorary member of the SCSC Steering Group, and, as a cross-sector safety and risk engineer, she works too – most recently in a series of RSSB-hosted podcasts in response to the RAIB Cambrian ERTMS incident. She works closely with a number of organisations across the UK rail

supply chain, including commercial, university research, governmental and related agencies, and engages with SCSC Working Groups wherever resources allow, including Security Informed Safety WG and Service Assurance WG. Emma expresses her personal views in this edition's 60 second interview.

What first attracted you to working in the field of System Safety?

I was working in the field of System Safety from age 18 as an undergraduate systems engineer with British Aerospace Space Systems, I just didn't realise it at the time. When I was looking at resilience of satellites and space stations under space debris impact, or working out whether a satellite would collide with another and so increase the overall risk in orbit, I was taking a system perspective and ensuring safe operations for myself and others. Everything connects back to a system safety mindset in one way or another. Now of course I'm working in the rail industry where regulatory oversight and system safety is front and centre, you can see clearly and directly the contribution you are making and the expectations on you and your projects.

What aspect of your career are you most proud of?

That's a tough one to answer! I think it's switching sectors and developing the technical knowledge, whether Oil & Gas platforms or rolling stock and infrastructure on the train network. System safety skills are of course cross-sector and we usefully learn a lot by looking at other incidents in other sectors. But, the tough truth is that in order to make a useful contribution you need to master the technical underpinnings. With that in mind, starting my cybersecurity career at age 50 with a Venture Capital funded, GCHQ accelerator enabled, rapidly growing scale up, definitely counts as the thing I am most proud of, to date at least.

What advice would you give to yourself age 12?

Take advice from a wide range of sources. The best path isn't always the linear path. As a mentor, I am always encouraging others (and myself) to do skills gap analysis and to look at alternative ways to get the experience to fill that gap. You don't necessarily need to have a job with a specific title to develop yourself.

How do you feel about being shortlisted for the 2021 most influential woman in the UK?

It's all a bit surprising really, as it's by Computer Weekly, for women in tech, and I'm only 4 months into my cybersecurity role. But it does reflect the increasing importance of understanding the role of what I call digital parts (whether embedded software, network systems etc.) play in overall operations. I foresee growth in digital accidents and investigations, and this is what I'm focussing my Visiting Professorship at Cranfield on.

What's your most favourite quote or motto?

"Model the way". It was taught to me by a coach nearly ten years ago now when I was involved in the crisis management, recovery and rapid growth of a consultancy team. It helps me translate ideas and plans into actions, and to get practical. What do I need to do today and tomorrow to move things forward, changing and updating as needed.

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

Fly (a plane). I like the idea of mastery. This is a tall order, given that I can barely ride a bike and don't have a driving licence! My spatial awareness isn't that good, so I think it's best that this goal stays in my imagination.

How important do you see the work of the SCSC?

The SCSC occupies an important and unique niche by providing a rich network of system safety professionals. I particularly appreciate the opportunity to share experience and ask "what if?" questions and the culture of trust and collaboration. I am a better system safety professional as a result of my engagement with my SCSC colleagues.

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

I like *Avengers Assemble* because it highlights how we all bring different skills to the technical party and how a team is greater than the sum of its parts. People are also themselves, with all their unique characteristics, positives and flaws too. I'll leave it to others to decide which of the characters is closest to me!

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

Make a plan. It doesn't matter if it's just half a page, and you can change it afterwards, plans always change. The advice was from my first mentor back in 2000. Despite his encouragement, I never did it. I've learnt better now, it's amazing just how the act of writing something down and leaving it to rest helps focus your activities. I have 6-month plans, 5-years plans and more.