

Machine man

The work in DSTA exposes senior engineer Sim Yong Siang Adrian to different technologies, weapons and platforms



Mr Sim attends courses and workshops that complement his on-the-job experiences. PHOTO: DSTA

by audrina gan

MR SIM Yong Siang Adrian, 33, is living his passion of working with sophisticated machines and technologies as a systems engineer at the Defence Science and Technology Agency (DSTA).

He says: "As a kid, I was constantly curious about how things worked. I remember going about the house and dismantling things with a screwdriver, only to get scolded when my parents got home."

He recalls ripping apart the air pump from his father's fish tank while it was still plugged in. The reason? He wanted to find the source of the pump's pulsating noise. He ended up tripping the power supply of the entire house.

Mr Sim's fascination with futuristic machines featured in Transformers, Star Wars and Gundam also fuelled his interest for science and engineering. After completing his Bachelor of Engineering (Electrical and Electronic Engineering) degree from the Nanyang Technological University in 2006, he applied for a guided systems engineer job at DSTA.

However, he left to pursue other interests outside the DSTA in 2010, which involved a stint in the finance industry and a small Internet start-up venture with a friend. But after three years in the private sector, he found himself missing the action, fulfilment and meaning he got at DSTA.

Last year, he re-applied to the organisation and is now a senior engineer at the DSTA's Systems Management Programme Centre. Mr Sim is part of an eight-member team that ensures the Singapore Armed Forces' (SAF) equipment and capabilities are operationally ready, reliable and serviceable.

In particular, he supports guided missile weapon systems on the Republic of Singapore Air Force (RSAF) aircraft, conducting system reviews, engineering studies, and equipment surveillance programmes, and providing live-firing exercise support and system recovery recommendations.

But that is not all. His job also includes participating in meetings with equipment vendors and manufacturers, giving presentations at forums and interacting constantly with his counterparts in other DSTA programme centres and the SAF.

"Work at DSTA is diverse as it exposes me

to different technologies, weapons and platforms. I enjoy the diversity and dynamic nature of my job, as I am not bound to my desk and even have had the opportunity to carry out my duties overseas," he says.

Overseas assignments include supporting live-firing exercises that RSAF participates in, like Exercise Forging Sabre held in the United States in December last year. At exercises like these, Mr Sim and his team analyse firing data gathered from the shots and evaluate weapon performances in various day and night mission scenarios.

Teamwork is essential

Due to the multi-disciplinary nature of his work, Mr Sim says teamwork is an essential aspect. "There are always many things going on at the same time, so much so that we rely on co-operation with each other and mutual trust to accomplish our tasks," he says.

DSTA, he says, fosters an environment of creativity where staff are constantly challenged to be innovative, be it providing better and more cost-effective solutions in their work or improving on existing processes and practices.

He appreciates the strong learning culture in his organisation. For example, the organisation provides milestone courses and workshops to train engineers in both technical and business competencies.

"These courses complement my on-the-job experiences. I have become more knowledgeable in the entire lifecycle of defence capability management, and this has helped me in my work of supporting smart weapons," he says.

Contributing to the defence and security of Singapore also gives Mr Sim a sense of purpose and achievement. "There is a sense of pride when I watch our pilots salute and take off in their jets. Knowing that I support our pilots who defend our skies 24/7 gives me a sense of satisfaction," he says.

To join the likes of Mr Sim, one needs to be goal-oriented, persistent, resourceful and willing to learn.

"When supporting exercises, you also need to be quick on your feet and competent as our SAF partners rely on you as the technical consultant to provide advice and innovative solutions," he says.