

New concepts to increase efficiency

DSTA scholar Woon Shi Hui uses her aptitude for figures to strengthen the country's defence

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BEING able to apply her aptitude for mathematics in the real world makes Ms Woon Shi Hui's career more meaningful.

The 27-year-old works as a defence researcher at DSO National Laboratories (DSO), the national defence research agency of Singapore.

After completing junior college in 2007, the Defence Science and Technology Agency (DSTA) scholar wanted to pursue a meaningful career in research and development (R&D).

She recalls: "I wanted a career that would allow me to apply my technical skills and knowledge to solve real-world problems and contribute to our nation's defence and security."

The DSTA scholarship suited her needs. Scholars have opportunities to work in the defence technology community that comprises DSO, the Defence Science and Technology Agency, Centre for Strategic Infocomm Technologies, Air Engineering and Logistics Organisation, Naval Logistics Organisation and Headquarters, Maintenance and Engineering Support (Army).

On the DSTA Undergraduate Scholarship, Ms Woon pursued a Bachelor of Science in Mathematics at University College London (UCL), and went on to obtain a Master of Advanced Study in Mathematics at the University of Cambridge.

The scholarship covered her tuition fees, monthly allowance, book allowance, airfare and other compulsory fees. She was also given a one-time allowance for a computer and warm clothing. There is a bond period of six years for an overseas scholarship.

She says: "The scholarship gave me the opportunity to pursue an overseas education at top universities and, upon graduation, to pursue a meaningful career in R&D at DSO."

Since graduating in 2011, she has dealt with the development of image processing algorithms in DSO and is currently handling operations research and analysis.

More efficient

She explains: "In my laboratory, I am involved in studies that look at how new systems and technology can play a role in the Singapore Armed Forces' (SAF) future missions. They give rise to the design of new concepts of operations, which can potentially allow SAF to be more efficient and effective."

She acknowledges that a lot of the technical issues that the DSO team work on have no readily available solutions. "It takes a great deal of commitment and a dash of creativity to solve these problems," she says.

She welcomes the challenging projects, enjoys working alongside committed colleagues, and appreciates the support from the management team.

She is happy that her work contributes to the defence of the nation.

"Singapore is a small country with limited resources. It is therefore important for us to leverage technology and to optimise the use of resources to serve Singapore's future needs, which in the case of my work are the needs of our nation's defence," she says.

Keeping an open mind

Ms Woon is grateful that the scholarship provided her with the invaluable opportunity to live and study abroad. This trained her to be independent, allowed her to experience different cultures and broadened her mind.

She says: "My interactions with people of various nationalities, from diverse cultures and backgrounds, made me realise that there are many paths to success, many ways to look at a situation and many solutions to a problem."

Ms Woon appreciates that her organisation is committed to providing the resources and environment that support continuous learning and upgrading. This includes offering internships, organising technical and soft skill courses for staff, as well as subscribing to scientific and defence journals that directly benefit staff in their work.

"Technology keeps advancing and the only way to stay ahead in this industry is to keep learning and improving," she says.



Ms Woon is motivated by the knowledge that her work contributes to the nation's defence and security.

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