

Alex Ngoi Yi Wei
DSTA Undergraduate
Scholar

Designation: Engineer (Land Systems), Defence
Science and Technology Agency

Studied: Master of Engineering (Mechanical
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DEFENCE SCIENCE AND TECHNOLOGY AGENCY

DEFENDING SINGAPORE THROUGH TECHNOLOGY

By staying at the forefront of defence technology, the Defence Science and Technology Agency (DSTA) is a key organisation in bolstering Singapore's defence and security.

By Koh Wanzi

DSTA takes the lead in the areas of defence science, technology and engineering by exploiting leading-edge technological solutions to ensure that Singapore remains well equipped to defend herself. In addition, it seeks to leverage the best technologies and adapt them for defence applications through a variety of unique and innovative solutions.

To this end, DSTA's community of engineers and technologists are its most important asset. As part of its efforts to attract and nurture talent in this field, DSTA offers comprehensive scholarship programmes that cater to individuals who are passionate about harnessing science and technology for Singapore's defence needs.

For 27-year-old Alex Ngoi Yi Wei, the DSTA Scholarship promised an exciting and meaningful career. As an Engineer in the Land Systems Programme Centre, Alex works with the latest technologies and supports the Singapore Armed Forces (SAF) in the development and implementation of cutting-edge soldier systems and robotics.

KITTING OUT THE ARMY

Alex graduated with a Master of Engineering (Mechanical Engineering) from the University of Cambridge and now contributes to ensuring that the SAF remains a formidable and advanced fighting force.

He shares, "I am a member of a team that delivers advanced soldier equipment and systems to the SAF. We equip soldiers with 'ruggedised' radios



“The greatest sense of satisfaction comes not from dealing with the latest in technology, but knowing that my work helps our soldiers do their jobs better. The DSTA Scholarship welcomes those who value analytical thinking, innovation and aspire to apply science and technology to strengthen Singapore’s defence!”

EMBRACING CHALLENGES

Alex has always relished challenging problems that push him hard to find the right solutions. At DSTA, each day presents a new and exciting challenge as he strives to develop effective solutions to complex technical issues.

Alex says, “My work has improved my project management skills in taking charge of various aspects of large-scale engineering projects. I have to acquire a good understanding of the SAF’s requirements, propose effective technical solutions and ensure that the project is on track and within budget.

“My projects also bring me into frequent contact with stakeholders and defence contractors, and this helps to hone my communication skills and provide valuable insights into defence-related developments. These are skills that no textbook can teach me, and the continuous development of my organisational and communication skills is what makes this job interesting and fulfilling.”

EQUIPPING ITS PEOPLE

DSTA seeks to nurture passionate individuals and offer them a dynamic and vibrant career in the Defence Technology Community. To best equip its scholars to build up Singapore’s defence capabilities, DSTA spares no effort in providing them with extensive support in the form of personal mentors, orientation programmes and community portals to keep in touch with other scholars.

Alex highlights the comprehensive support provided by the DSTA Scholarship Office during his studies abroad. He says, “I was part of a buddy system where I was paired with a senior scholar who shared what to expect during my overseas studies and helped me adapt to life at Cambridge. My buddy was also someone I could speak with about my university courses and potential career pathways.

“In addition, DSTA Scholarship Officers are also always on hand to provide advice on academic or personal matters. With such ample

support and guidance, we are hardly ever alone during our time overseas.

“I also got to interact with some of the brightest minds around the world and it was an immensely enriching experience that expanded my knowledge and perspectives. At the university, I was active in several clubs and societies such as the Student Council and the International Students’ Union. I also took the initiative to start a basketball club to bring fellow basketball enthusiasts together! My years at Cambridge were extremely fulfilling and it was only because of the DSTA Scholarship that I had the privilege of a world-class, overseas education.”

DSTA continues to support its scholars even after graduation with its Work Experience Programme, which is specially tailored to help employees gain relevant working experience. “Under the DSTA Scholarship, I had the opportunity to work at DSO National Laboratories in my first year after graduating as part of the Work Experience Programme. This was an invaluable opportunity for me to acquire more technical knowledge and learn more about working in a research and development environment.” Alex says.

A TIGHTLY KNIT DEFENCE COMMUNITY

The close-knit and communal culture at DSTA makes Alex feel right at home and eased his transition into the organisation after graduation. There is a warm and friendly culture of mutual support and knowledge sharing in DSTA, where staff members work together to seek out new solutions to meet Singapore’s defence needs.

Alex concludes, “The greatest sense of satisfaction comes not from dealing with the latest in technology, but knowing that my work helps our soldiers do their jobs better. The DSTA Scholarship welcomes those who value analytical thinking, innovation and aspire to apply science and technology to strengthen Singapore’s defence!” ■

and computers that can withstand harsh military conditions. In addition to soldier systems and robotics, the Land Systems Programme Centre delivers infantry fighting vehicles, tactical vehicles and bridging equipment, as well as develops command and control systems and sensors.”

Alex has been involved in several innovative projects to enhance Singapore’s defence capabilities. He enthuses, “One of these projects is the development of portable and versatile charging devices that can power various communication and information technology systems in the field. As there is no single commercial system that can fulfil this requirement, it is up to us to brainstorm and come up with creative and innovative ways to integrate the various technologies.

“I am also working to deliver smartphones that are rugged and secure enough for military use. Hence, my work involves turning something ordinary like a smartphone into equipment that gives our soldiers a decisive edge in the field. To me, these projects are exciting and amazing. There is also a great sense of achievement in making it easier for soldiers to adopt new technologies and boost the SAF’s operational capabilities.”