

# Staying ahead of the curve

Siblings Tay Mingwei and Tay Mingfang realise their dream careers with the DSTA scholarship

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WORKING at the Defence Science and Technology Agency (DSTA), the Tay siblings — Mingwei and his sister Mingfang — are a bit of a rarity. Both are scholars and both work at the organisation reputed for being at the forefront of defence technology.

It all began with Mr Tay's interest in computer programming when he was a student. While learning it, he realised that some of the most cutting-edge technologies are to be found in the defence industry, such as in its unmanned aircraft and vehicles, and laser weapons.

Eventually, he decided to pursue a career in defence science and technology. With DSTA having a

reputation for being at the forefront of technology, he decided to take up the DSTA Scholarship to study electrical and computer engineering at Carnegie Mellon University (CMU) in the United States. Midway through his undergraduate studies, it was his sister's turn to consider scholarships.

"I remember at that time how impressed I was by the professionalism and dedication of the DSTA staff and my mentor," says Mr Tay, 31, who went on to graduate with a Master of Engineering in Electrical and Computer Engineering.

"My mentor then always had the end user in mind when developing a solution, going over and above what was required of him. I felt that DS-

TA was an organisation that could develop me holistically to achieve my full potential. I shared with Mingfang how I felt so that she could make a more informed decision."

Ms Tay was already well acquainted with DSTA as she had participated in the Young Defence Scientists Programme in junior college that was organised by DSTA and DSO National Laboratories.

The experience piqued her interest in defence science and technology.

## Valuable insights

As Mr Tay had already done an internship with DSTA as part of the scholarship programme, he could provide insights that added value to her eventual decision.

"My brother was able to give me insights into the work that DSTA does, and how it contributes to the defence and security of Singapore," recalls Ms Tay, 26.

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DSTA

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With her sights firmly set on a career with DSTA, Ms Tay headed to the United States where she studied electrical engineering and computer science at the University of California. She eventually graduated with a Master of Engineering in Management Science and Engineering.

Upon completing his studies, Mr Tay returned home and, from 2009, worked for DSTA's Command and Control, Communications, Computer and Intelligence (C4I) Development Programme Centre.

He spent five years there before taking up a posting as Assistant Head of the Defence Technology Office (DTO) in the United States in 2014.

"My role in DTO (US) is to enhance the relationship between the Ministry of Defence and the US government through defence technology collaboration," he says.

"I also scout for interesting technologies that would benefit the Singapore Armed Forces (SAF)."

While pursuing her undergraduate studies under the DSTA Scholarship, Ms Tay underwent a 10-week internship at DSTA's Air Systems Programme Centre, where she worked on the integration of systems onboard the F-16 aircraft.

That association with fighter jets continued after her graduation when she was posted back to DSTA's Air Systems Programme Centre in 2012. The programme handles the acquisition, systems integration and development, and upgrading of air platforms for the Republic of Singapore Air Force (RSAF).

## Superior technology

"My work involves integrating systems onboard the RSAF's F-15SG fighter jet," says Ms Tay.

"The F-15SG is an all-weather multi-role fighter designed to achieve air superiority over the battlefield.

"It has exceptional situational



Ms Tay enjoys the challenges that come with being involved in large-scale projects. PHOTOS: DSTA

awareness capabilities, enhanced air-to-air and self-defence capabilities, and outstanding survivability. I work closely with partners in the RSAF and contractors to ensure that the systems we deliver for the F-15SG meet the stringent requirements and needs of the RSAF."

Ms Tay enjoys the challenges she faces as a young engineer and the learning curve initially, she explains, is steep as she is involved in large-scale projects like developing and integrating systems onboard the F-15SG aircraft.

But working for the DSTA ultimately is about providing lead-

ing-edge technological solutions to the SAF so that it continues to be a formidable fighting force for the defence and security of Singapore.

Mr Tay's advice to potential DSTA scholars is to research into the field of defence science and technology, and into the diverse portfolio of DSTA, to determine if it is a good fit with their career goals and passion.

"DSTA scholars should also possess the ability to work through and provide solutions to complex problems, and the persistence to pursue the best engineering solutions for the SAF and our nation's defence," he says.



Mr Tay is always looking for interesting technologies that can benefit the SAF.