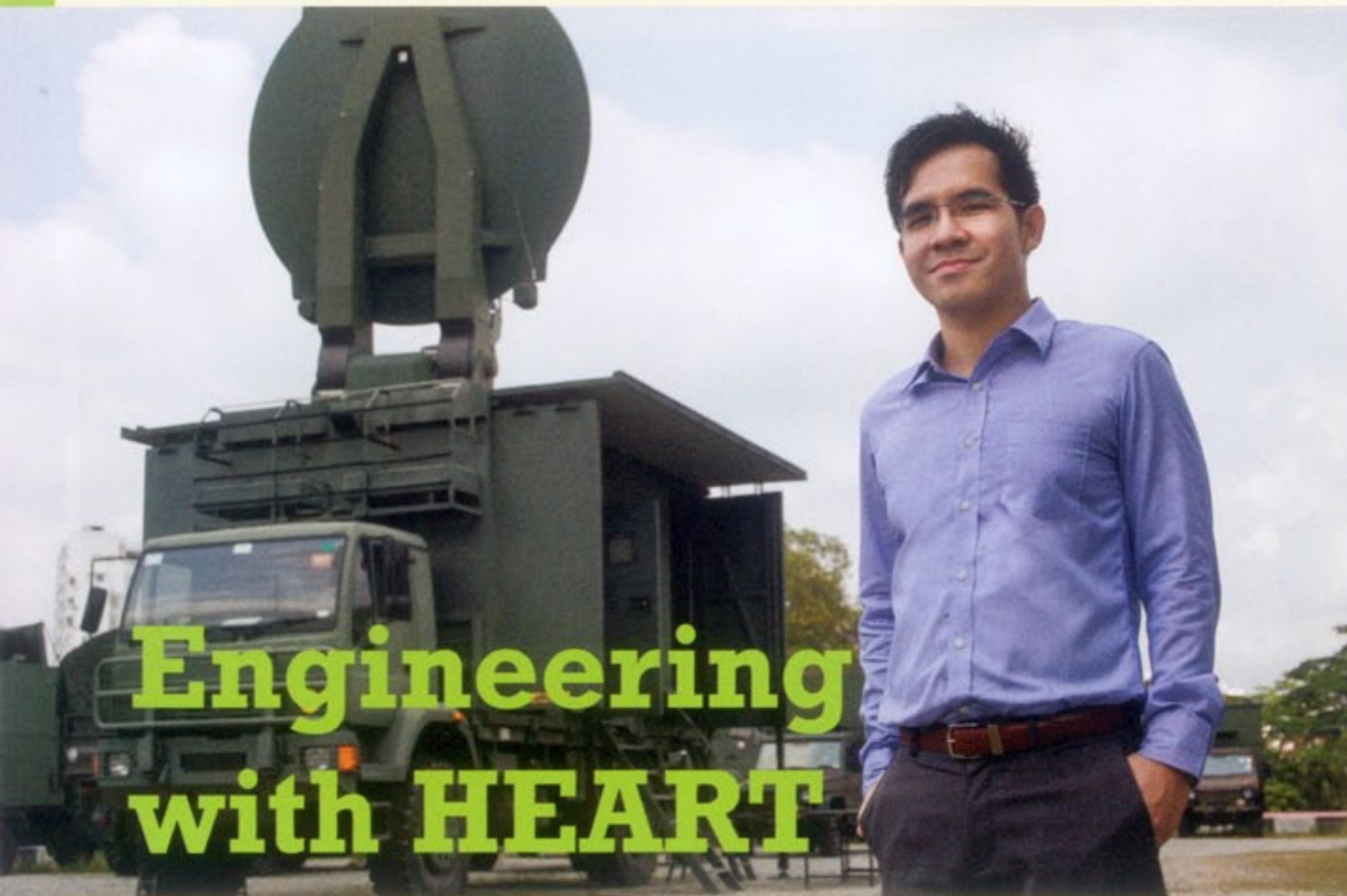


Advertorial



# Engineering with HEART

NTU alumnus Wong Jiaxiang's career has taken him from the heat of the Australian prairie to the heart of Singapore's 49th birthday celebrations

by Christopher Ong

In 2011, Jiaxiang experienced the prairie's unforgiving terrain as part of a military exercise with the Singapore Armed Forces (SAF) as he tested a new satellite communications (SATCOM) system he helped to design. This year, as Chairman of the National Day Parade's Public Address and Sound Committee, he ensured that the event was, literally, *pitch* perfect.

It's fair to say that Jiaxiang, a project manager, has had an eventful career with the Defence Science and Technology Agency (DSTA) since joining its Networked Systems Programme Centre straight out of university in 2007.

The 31-year-old NTU Electrical & Electronic Engineering graduate says: "I wanted to join an organisation where I could make a meaningful difference to my home and country."

"As a fresh graduate, I was also drawn to DSTA as it is known for being at the cutting edge of technology. I knew I would get to work on exciting and complex engineering projects that would have an impact on Singapore's security. The diversity of these projects also meant that I could develop competencies in different areas."

One of his key contributions is equipping the SAF with Ku-Band satellite communications capability, making satellite communications 17 times faster compared to the previous system, and cheaper and faster to deploy. Such systems use orbiting satellites to allow soldiers to send voice and data precisely and reliably over vast distances.

Jiaxiang spent a month testing the Ku-Band SATCOM system during Exercise Wallaby, the SAF's annual military training exercise in Australia.

He says: "It was thrilling to see it perform well under very challenging operating conditions.

While most people might not see the Ku-Band SATCOM system in action, I know my work adds to Singapore's defence capabilities. It is also especially meaningful for me that the system can be used during disaster relief operations when lines of communications are down."

Another memorable moment for Jiaxiang was being part of this year's National Day Parade, where he led a team of five

to provide high-quality audio systems for the sound and music broadcasts during the entire show.

His team displayed its ability to innovate and improvise when faced with a challenge. He explains: "With the military parade and performances taking place in front of the stage, we were not able to use that prime location for the speakers to project the sound to the VIP and central seating areas."

"Our solution was to hide directional speakers underneath the stage to project the same high-quality sound towards these areas. We used a special, permeable material that concealed the speakers while allowing the sound to be projected clearly."

He adds: "It's an honour for me to have helped engineer a part of this year's celebrations. From the music and lighting to the pyrotechnics and the performers, everything came together perfectly that day."

**DAILY REWARDS**

***"Working in the Public Service with DSTA lets me do my part to protect what matters most – our home. My job is meaningful and exciting, and this makes it much easier to get up for work every day."***

## NUTS AND BOLTS OF SUCCESS

*Jiaxiang shares what to expect from an engineering career with the Public Service*

**Drive and passion**

If you want to embark on an engineering career with the Public Service, you need two things – drive and passion. Knowing that my work plays a part in building Singapore's defence motivates me greatly to give my best.

**A spirit of innovation**

I appreciate how the management fosters an innovative spirit in all of us and encourages us to strive for excellence. At DSTA, we have an annual Innovation Day to share and recognise good ideas. With knowledge sharing being a big part of DSTA's culture, there are many other avenues for DSTA staff to share their insights and innovations.

**Commitment to people development**

I am always heartened to know that my organisation truly cares about training and developing its people. Leadership development programmes are part and parcel of the courses I have taken at DSTA and these prepare me for future roles as my career progresses.



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