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New digital technology research centre at NTU Singapore to focus on air traffic management and underwater robotics

The Centre housed in NTU's School of Mechanical and Aerospace Engineering will conduct research into AI, cybersecurity, machine learning, computer vision, anomaly detection and unmanned aircraft system camera insertion.

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By [Priyankar Bhunia](#)



Above photo: (From L-R) Saab's Senior Vice President and Chief Strategy Officer Ann-Kristin Adolfsson, NTU Singapore President Prof. Bertil Andersson, Saab chairman Mr. Marcus Wallenberg, NTU Singapore President-designate Prof. Subra Suresh, and NTU Acting Provost, Chief of Staff and Vice President for Research Prof. Lam Khin Yong/ Photo credit: Saab

Nanyang Technological University (NTU) in Singapore is setting up a joint research centre to develop research projects and programmes in high-end digital technology, in collaboration with Swedish defence and security technology leader Saab.

A key focus of the Saab-NTU Joint Research Centre is air traffic management, with research into areas such as artificial intelligence, cybersecurity, machine learning, computer vision, anomaly detection and unmanned aircraft system camera insertion.

Another area of focus is underwater robotics, with an emphasis on research in robot perception (sensing, detection and navigation) and endurance (energy storage and reliability).

Prof. Vu Nguyen Duong, director of the Air Traffic Management Research at NTU's School of Mechanical and Aerospace Engineering, will be leading the research as its principal investigator. This is also the department that will house the Saab-NTU Joint Research Centre.

Saab plans to make an initial investment of S\$1.6 million in the first year, in its collaboration with NTU. This will be followed by an annual investment for five or more years which will be matched by NTU.

As part of the collaboration, Saab will recruit top candidates to do their PhD at NTU to conduct the joint research and development work. The Saab-employed PhD students will have opportunities to be involved with Saab's various operational branches in the Asia-Pacific region, as well as its global headquarters in Sweden.

To initiate the partnership, NTU and Saab signed a Memorandum of Understanding (MOU) on October 18 at the Royal Swedish Academy of Engineering Sciences, before the start of the two-day [Wallenberg Autonomous Systems and Software Programme \(WASP\)-NTU Workshop](#) in Stockholm.

The MOU was signed by Prof. Lam Khin Yong, NTU's Acting Provost, Chief of Staff and Vice-President for Research, and Ann-Kristin Adolfsson, Senior Vice President and Chief Strategy Officer of Saab.

It was witnessed by NTU President Prof. Bertil Andersson, Mr. Marcus Wallenberg, Chairman of Saab, and Prof. Subra Suresh, who will succeed Prof Andersson as NTU's fourth president on 1 January next year.

Prof. Bertil Andersson said, "NTU will leverage the university's strengths in interdisciplinary research, and combine them with Saab's expertise in aeronautics and defence technology to develop next generation technologies that will benefit both industry and society."

Prof. Subra Suresh said, "Industry investment into university-based research and development, supporting the search for new discoveries and then translating them into industrial products and services, is critical to the advancement of science and innovation. NTU and Saab are breaking new ground together and this serves as a model partnership for companies looking to kick-start their R&D presence in Singapore. At NTU we look forward to realising the great potential of this joint

research partnership which will benefit from the talent and creativity of our faculty and students and from Saab's technical capabilities."

"Through our joint research, Saab will be able to tap into the ever growing and highly important Asia market while securing the engagement some of the region's leading researchers to the company," said Mr. Pontus de Laval, Saab's Chief Technology Officer. "Saab has a long history of collaborating with academia. Earlier research projects have all been located in Sweden, tied to Swedish universities and researchers. This collaboration with NTU is the first of its kind in Asia for Saab. It is a long term research project that will help to broaden Saab's knowledge base and business network in Asia-Pacific – a key market for Saab in the future."

The MOU is also the latest in a long list of collaborations between NTU and Swedish institutions. It includes WASP, the Swedish Foundation for International Cooperation in Research and Higher Education, clean air solutions provider Camfil AB, and low energy lighting specialists LightLab Sweden AB.