

# Meet the professor at Asia's 3rd-best university behind Singapore's first homegrown eVTOL

By **Phong Ngo** October 3, 2026 | 04:32 pm PT



Get VnExpress first in Google Search ⓘ

James Wang, who coined the term "eVTOL" for electric vertical takeoff and landing aircraft nearly two decades ago, has led the development of Singapore's first homegrown electric aircraft.

The Nanyang Technological University (NTU) professor led the team that designed, engineered and built the electric vertical takeoff and landing (eVTOL) aircraft, which underwent flight tests in Cochstedt, Germany, in July.

NTU ranks joint third in Asia with the National University of Singapore in the QS World University Rankings Asia 2026.

During a month-long campaign at the German Aerospace Center, the larger eight-meter-wingspan prototype completed 20 flights totaling 43 minutes and reached an altitude of 92 meters, NTU said in a Sept. 30 post.

A smaller three-meter version completed 17 flights totaling nearly two hours, reaching about 120 kph and an altitude of 60 meters. The tests capped more than three years of work by Wang and his team, taking the aircraft from design and engineering through manufacturing and flight.



Nanyang Technological University's professor, James Wang. Photo courtesy of Vertical Flight Society

For Wang, they marked the latest milestone in more than three decades of work in vertical-flight technology.

He has worked on more than 30 crewed and uncrewed aircraft programs and coined the term "eVTOL" in 2008, according to NTU. Two years later, he led the development of AgustaWestland's Project Zero, the world's first all-electric tiltrotor technology demonstrator. The aircraft was publicly unveiled in 2013.

Wang previously worked at Sikorsky Aircraft and AgustaWestland, now part of Leonardo Helicopters, before joining NTU in 2019. At the Singapore university, he established the eVTOL Research and Innovation Centre with a simple motto: "If it can be dreamt, it can be built."

Professor Louis Phee, NTU's Vice President for Innovation and Entrepreneurship, described the center's original objective as a "moonshot goal": developing the expertise needed to design and build an airworthy electric aircraft in Singapore.

Wang's team eventually grew to about 30 research engineers. Rather than assembling an aircraft largely from technologies developed elsewhere, the researchers worked across most of its core systems.

They designed the motor and electrical system, developed the software controlling the aircraft, built the airframe and integrated its propulsion system, electronics and sensors. The resulting eight-meter prototype, unveiled at the Singapore Airshow in February, became Singapore's first locally designed and built full-sized aircraft.

Eight electrically powered lift rotors mounted on its wings allow it to rise and land vertically. Once it gathers speed, the wings increasingly provide the lift needed to keep it airborne while a rear propeller drives it forward like a conventional airplane.

Aircraft are also a personal pursuit for Wang. He has designed and piloted model aircraft and helicopters for years, accumulating more than 10,000 flights.

During the Germany campaign, he was among the pilots remotely controlling the prototypes. The flight tests were conducted in an area measuring 1.2 by 2.4 kilometers, larger than any



suitable open space available to the researchers in Singapore, *The Straits Times* reported.

The eight-meter prototype suffered a hard landing near the end of the testing period and could not be repaired in time for the team to evaluate its forward propulsion. Wang nevertheless described the tests as successful, saying the team had developed the expertise to engineer, manufacture and build an eVTOL aircraft in Singapore.

The prototypes are research demonstrators and are not designed to carry passengers. The longer-term ambition is considerably larger.

Wang said the technology could eventually be scaled into aircraft of different sizes, including a 14-meter-wingspan version capable of carrying five people and a three-meter version designed for cargo. His team also plans to improve the aircraft's autonomous flight capabilities and range while exploring hydrogen power and greater battery capacity.



James Wang (front, second from left) and his team with their 8-meter wingspan eVTOL. Photo courtesy of NTU



Turning the research into a commercial aircraft, he said about S\$975 million (US\$762 million) would be needed from investors, along with additional talent and government support, to move toward commercial operations in Singapore. The project has received S\$25million in government funding so far.

The aircraft has not received regulatory certification from the Civil Aviation Authority of Singapore to operate in the country. The team has previously conducted tethered tests at Kranji Racecourse, where the aircraft was secured to the ground.

Wang estimates eVTOL aircraft could take eight to 10 years to enter commercial operation in Singapore, potentially putting their debut around 2035. NTU plans to work with industry partners to explore commercial applications for technologies developed through the project, with the eventual aim of developing a full-sized aircraft capable of carrying passengers and cargo.

For the engineer who has spent decades pursuing electric vertical flight, the successful flights in Germany marked the end of one stage rather than the destination.

"The journey from zero to one has been made," Wang said. "Now, the journey from one to the future begins."