

Master Lecture of College of Engineering: Dr. Jong-Shinn Wu Announced the Arrival of the New Space Age

On December 14, the Master Lecture of College of Engineering invited the Director General of the National Space Organization (NSPO), Dr. Jong-Shinn Wu to give a lecture on “Taiwanese Dream to Space”. He told the faculty and students at present that the “new space age” is not just a new buzzword in science and technology, but an unstoppable trend. After NSPO transforms into a Foundation next year, it will increase its manpower to nearly 600 people annually, and young people are needed to join the upgraded Space Center.

In his speech, the Vice President for Academic Affairs, Dr. Hui-Huang Hsu, stated that NSPO, formerly under the National Science and Technology Council, has been upgraded in status after its transformation and will have more funding to cultivate talents. He hopes that Director General Wu will have good development plans in the space industry chain and give the students present the opportunity to showcase their talents and contribute to the country’s space dream.

Dr. Jong-Shinn Wu is also a distinguished professor of the Department of Mechanical Engineering of National Yang Ming Chiao Tung University, where he mainly conducts research on rarefied gas dynamics simulation, rocket propulsion, non-equilibrium low-temperature plasma simulation, plasma application (biomedical, agricultural, aerospace, industrial), and parallel scientific computation. He is most widely known as “Uncle Rocket”, and the rockets he has developed have the ability to control their attitude and hover at a fixed point, potentially being upgraded to transport rockets in the future.

Dr. Jong-Shinn Wu started by positioning Taiwan's current capabilities in space among other countries using data analysis. He then used Japan's JAXA Hayabusa spacecraft as an example to discuss the rapid development of space technology in the past 15 years. The key to the current new space era is the successful recovery of rockets by the famous private rocket vehicle company, SpaceX, which significantly reduces the cost of launching satellites. He also mentioned that the funds invested in the space industry in recent years are doubling, showing that the "new space age" is not just a buzzword, but an unstoppable trend.

Dr. Jong-Shinn Wu led the audience to review past projects completed by NSPO to showcase Taiwan's past efforts to build strength in the space field despite limited resources. He also took the opportunity to introduce TRITON (Wind-Hunter) weather satellite, which will be applied in 2023, and the B5G low-orbit communication satellite system, which aims to support domestic businesses and improve communication resilience, as well as the FORMOSAT-8 optical remote sensing satellite system, which he currently presides over. These projects demonstrate Taiwan's increasing commitment to space and show that the government highly values them.

Finally, he introduced the future plans for NSPO after it is upgraded to a statutory organization and renamed as Taiwan Space Agency (TASA). After the upgrade, TASA will have a higher budget and will become the highest authority in leading the development of Taiwan's space industry. In addition to establishing a Space Transportation Affairs Office to research and develop launch vehicles, additional departments will be established to facilitate industry communication and support startups. Through such incubators, not only can the center's internal personnel use key technologies to start businesses, but it can also guide startups in the academia-industry collaboration, thereby expanding Taiwan's space industry.

