

# Conferment of the Degree of Doctor of Science, *honoris causa* A Citation



## Mr Yang Liwei

Mr Yang Liwei is the first Chinese astronaut to have travelled in the outer space. His eminent success, which has drawn attention around the world, has its origin in a small town in the northeast of China, in the family of a hardworking and modest school teacher. In 1965, Yang Liwei was born in Suizhong County in Liaoning province, the second child of the family. From a tender age he learnt from his parents a practical and industrious approach to life, and this down-to-earth spirit has provided him with the *primum mobile* for his celestial career.

Having finished school in his home town in 1983, Yang Liwei was admitted to the Number 8 Aviation College of the People's Liberation Army Air Force. He graduated with excellent grades in 1987, and became a pilot in the Air Force, fulfilling a long cherished dream. He flew various types of fighter aircraft and rose to Squadron Leader. With 1,350 flight hours, he achieved a high technical competence; he was ranked a pilot of the first class and was twice awarded Third-Class Merit, in 1992 and 1994.

In 1996, as the nation's space programme gathered momentum, China looked to its armed forces for astronaut candidates. After a series of the most stringent assessments and physical examinations, 13 candidates were selected in January 1998, among them Yang Liwei. This first cohort of astronauts were enrolled at the Astronaut Training Base in Beijing. They went through a training regimen of unprecedented rigour, fired by the desire to roam the heavens, a dream that has tantalized the Chinese mind for millennia.

Training in astronautics is distinctly different from training in aeronautics. Even a veteran pilot such as Yang had to start again from the very basics. In five years of the utmost hard work, he began with basic theories, followed by technical and practical training. The theoretical training over 30 disciplines and over 100 courses covered an extensive range of subjects: aviation dynamics, air dynamics, geophysics, space physics, jet propulsion, space navigation as well as flight monitoring and control. A severe regime of practical training included tests under high g-forces that pushed human physiological endurance to its limits and beyond. In addition, the astronaut candidates had to exercise in areas outside Beijing such as the Guanting Reservoir, in order to train for sea escapes and wilderness survival.

Mr Yang amply demonstrated his indefatigable spirit and unyielding perseverance during the five years of strenuous training. With tremendous courage, willpower and diligence he came first in three important assessments, and was eventually placed on the final shortlist of three. On the eve of the expedition, he was selected as China's first man in space for being able to maintain the best psychological stability, such was his rock-solid composure during the final phase of training and assessment.



Everything was ready at the Jiuquan Launch Centre in the morning of 15 October 2003. The astronaut Yang Liwei, spirited and assured, made his way into Shenzhou-5, the largest manned spacecraft in the world up to this time. On his shoulders rested the task of achieving glory for the nation. Armed with courage and propelled by a sense of responsibility, he was ready for the momentous journey into space.

Shenzhou-5 was launched into space by the Changzheng-2F carrier rocket, nicknamed the "Magic Arrow". The flight up was successful and the spacecraft entered its orbit ten minutes after the launch. In the 21-hour mission Yang Liwei orbited the earth 14 times, making a journey of about 600,000 kilometers. Shenzhou-5 then landed safely on the Amugulang Prairie in the Siziwangqi Region of Inner Mongolia, only 4.8 kilometers from the designated landing spot, significantly pointing to the advanced achievements of astronautics in China. For five thousand years the Chinese had dreamed of celestial travel, as manifested in the myths of Chang'e and Kun and Peng and the poetic conceits of Li Bai (*"Let us hope for a meeting amidst the clouds and the stars"*); this dream has come to be realized. China also became the third space nation, after the United States of America and the former Soviet Union.

The first Chinese astronaut accomplished his mission with great success, and with great flair - while orbiting past midnight on 16 October, he told mission control that he felt "good". The remark, simple yet overwhelming, immediately invigorated a billion hearts, reverberating in the minds of countless people in China. We can imagine Yang Liwei looking out of the spacecraft, surveying the boundless universe above and the expansive planet earth below. Such a celestial experience, beyond the understanding of the ordinary soul, must have given Yang Liwei the capacity to appreciate and embrace all that is between Heaven and Earth, and with that a greater generosity of mind and a more profound humility of character.

Amidst all the accolades and tributes, the triumphant Yang Liwei attributed the success of China's first manned space mission to collective effort and team spirit. At a welcome reception on 31 October 2003 in Hong Kong he said: "The realization of a millennium-old dream once again bears witness to the world that the Chinese people have the wisdom and the courage to take their rightful place among the peoples of the world. With our own power and resources, we have built our way to the heavens. Several generations of astronautics experts have given their utmost to the cause; they are the true heroes" - words as sincere as they are moving. Standing on the shoulders of giants and showing the way for those to come, Mr Yang has indeed achieved a breakthrough of monumental significance.

Mr Yang Liwei is a gentleman of a modest disposition. He respects his parents and loves his family; his career does not allow him sufficient time and attention for his loved ones. However, as the old adage has it, "A general forgets his family the day he receives his orders. Fortunately, his parents and his wife fully understood the importance of his mission, and gave him the support that he needs; Yang Liwei was therefore able to go on his mission with composure and freedom from worries.



Commendations have been heaped upon Yang Liwei's tremendous success. The Nanjing Purple Mountain Observatory will name an asteroid the Yang Liwei Star, while the American Astronautical Society conferred upon him, in Vancouver on 5 October 2004, the Flight Achievement Award for the year, this being the first time the award was presented to a non-American since it was established in 1958. A previous recipient is Neil Armstrong, the first man on the moon.

Mr Yang Liwei achieved the flight to outer space through years of stringent training, unrelenting efforts, unremitting diligence and perseverance. Eagerly watched by billions of his compatriots, he created a first for astronautics for the Chinese people; he showed to the world China's achievements in science and technology, and laid a foundation for the country's astronautical endeavours in the years to come. His indomitable spirit and his determination to achieve will provide an excellent role model for our young people. The "Magic Arrow" carried Shenzhou to great heights; Yang's willpower propelled him to great deeds. Mr Chairman, I respectfully present Mr Yang Liwei for the award of the degree of Doctor of Science, *honoris causa*.