
Honorary Doctor of Engineering

Professor XU Kuangdi

Citation written and delivered by Professor LU Jian

Pro-Chancellor:

I have the great honour today to introduce Professor Xu Kuangdi, a celebrated engineer and a political as well as a technological leader in China, for the conferment of an Honorary Doctorate in Engineering.

From the very day he was born, the 11th December 1937, Professor Xu's life has been inextricably linked with the fate of his country and people. He came into the world in an ancient temple in Songling, on the borders of Zhejiang and Jiangxi, when his parents in company with countless others were forced to flee from Shanghai to escape the fighting then raging between the invading Japanese and China's defending armies. They were heading south in the hope of finding refuge in the southwest of China, where the central government had been forced to move. Born in the throes of that terrible war, Professor Xu was named Kangdi ("fighting the enemy") by his parents in the hope that when he grew up he would never forget the wrongs inflicted on his homeland and "be man enough to strive against hardships, and protect the country by fighting the enemy".

As intellectuals, Professor Xu's parents were very concerned that their son should receive the best education possible. They saw to it that he was educated successively at the primary school attached to the Southwest United University, Hangzhou Tianchang Primary School, the municipal Hangzhou Middle School, and the provincial Hangzhou High School, all of which were prestigious local schools. This early education provided a solid foundation for his success in later life.

In 1954, like many other young people bubbling with idealistic enthusiasm, Professor Xu wanted to equip himself with knowledge and skills that would enable him to contribute to the country's national defence and industrialisation. He therefore sat an entrance examination and was successful in gaining admission to a degree course at the Beijing Industrial Institute of Steel and Iron. This was one of the eight institutes set

up jointly by nationally renowned educational institutions such as Peking University, Tsinghua University, and Peiyang University. Situated in the noted Xueyuan Road of Beijing, the Institute was known as the “Cradle of Steel”. In 1959, when Professor Xu graduated, his excellent academic achievements qualified him for postgraduate studies at the Institute. However, because of his father’s background, he was prevented from continuing his studies. Fortunately, the Institute, having an eye for talent, invited him to stay on as a tutor. In 1963, Professor Xu was transferred to the newly established Shanghai Institute of Technology, where he also served as a teacher. In 1966, however, the ten-year-long Cultural Revolution broke out, interrupting his developing career and it was not until 1972, six years later, that Professor Xu was able to resume his teaching duties.

It was in 1976, however, when the Cultural Revolution came to an end, that his academic career took off. The next twenty years or more were to prove a golden era in his scientific research career. He spent 1981 to 1985 first at the Imperial College of Science, Technology and Medicine in Britain, then at the Royal Institute of Technology in Sweden, and finally at the Scandinavian Lancer Corporation, also in Sweden, devoting himself to the fundamentals and technological development of jet metallurgy, with many notable results. He was granted patents for his inventions in both Britain and Sweden, and attended many international metallurgical expositions and iron and steel congresses, acquiring a sound grasp of cutting-edge developments in the international iron and steel industry, and establishing friendships with a great number of celebrated specialists in the field.

Upon his return to China in the mid-1980s, Professor Xu switched his research focus from metallurgical technology to applied theoretical foundations and selected innovative studies. By applying the theories of thermodynamics, dynamics, and thermodynamic equilibrium, and by means of computer modelling and computation, Professor Xu effected major improvements in technological design. Even more importantly he completely revolutionised the traditional method of research by random tests, thus greatly reducing the time needed for the development of new techniques. The great impact of his achievements in the fields of electric steel-making, jet metallurgy, secondary refining of liquid steel and smelting reduction was felt internationally. In addition to achieving technological breakthroughs, Professor Xu regards the education of talented students as a major responsibility. He has therefore trained for China many high-calibre young people, two of whose doctoral dissertations in ferrous metallurgy

were ranked among the National Top 100 Doctoral Dissertations. The ranking is done every two years and is highly competitive. Many of Professor Xu's students have gone on to become academicians.

While teaching and scientific research are the activities dearest to Professor Xu's heart, his first priority has always been the national interests of China. In the early 1990s, he started a new chapter in his career, serving the country's needs first as Director of the Shanghai Municipal Planning Committee, and then as Deputy Mayor of Shanghai. Finally, in 1995, he took up the key post of Mayor of Shanghai, the hub of China's economic development and widely regarded as the cradle of China's modernisation. Mayor Xu oversaw the city's balanced and harmonious development, and worked hard to develop it into a truly international metropolis fit for the 21st century.

Today, the Pudong New Area, so painstakingly developed by Mayor Xu, with its high-rise buildings and the magnetic levitation train that passes through, is a potent symbol of China's economic takeoff. Mayor Xu also won the bid for his city to host the 2010 World Expo, which showcased China's modernisation to the rest of the world. Under Mayor Xu's planning and leadership, Shanghai has indeed taken the lead in China's peaceful rise in the world. The Baosteel Group Corporation, situated in Shanghai and known for its advanced technology, ranks first in China, and with the Group in the lead China has become the world's largest steel producing country. The industry's excellence and integration capabilities enabled it to construct the Beijing National Stadium, or "Bird's Nest", which was the principal arena of the Beijing Olympics, highlighting in the eyes of the whole world China's progress from quantity to quality as a world leader in advanced steel production and fabrication. Mayor Xu's international vision, farsightedness, originality, industry, and sensitivity to the people's needs contributed greatly to Shanghai's success as an international economic centre. Today, ten years after Professor Xu left for Beijing to take up important official positions, the people of Shanghai are still full of praise for his government, which speaks volumes for his achievements and their far-reaching effects.

From 2002 to 2010, as President of the Chinese Academy of Engineering, Professor Xu was at the head of China's most prestigious advisory institute in the field of engineering. Under his leadership, China's engineering experts generated a stream of innovative ideas and provided strategic consultation for the rapid development of the

country's economy across a range of core industries spanning aerospace and aviation, modern means of transport, electronic communication, materials, manufacturing, national defence, energy resources, agriculture, environmental engineering, and medicine. At the same time, issues of international concern, such as energy resources, the environment, and sustainable development, were matters of very great concern to Professor Xu, prompting him to call for and to actively develop energy-saving and green industries. His contributions to the development of China's science and technology have been enormous, especially in the field of engineering research and education, and have helped to ensure that China will have sufficient qualified manpower available to draw on to ensure its sustained development in the future.

In March 2003, Professor Xu was elected Vice-Chairman of the Chinese People's Political Consultative Conference, and in September of the same year, he also became Chairman of the China Federation of Industrial Economics. Holding a national position, he is able to play an active and constructive part in China's political arena, where he makes his expertise freely available for the benefit of all. Through effective interaction with the central government, he provides high-level guidance for China's development, and participates in the formulation, supervision, and implementation of the country's key policies.

Before the end of World War II, Professor Xu's teacher of Chinese had renamed the young boy Xu Kangdi "Xu Kuangdi", "Kuangdi" connoting "upholding justice and enjoying a propitious and peaceful life". The name reflects an intellectual's hope that, after the war, China would have the opportunity to develop in a peaceful and well-ordered environment. Professor Xu is a studious, many-faceted scholar with a ceaselessly enquiring and innovative mind. He enjoys reading and is outstandingly meticulous in all aspects of his work. With his worthy deeds and outstanding achievements, he may be looked upon as a role model of shining integrity for China's scholars and officials, and also for our students as well as our scientific and educational communities. This year happens to be the 100th anniversary of the 1911 Revolution. Today's occasion is therefore particularly significant because it has brought together here at City University of Hong Kong representatives from the mainland, Taiwan, and Hong Kong, who have all made important contributions to the peaceful development and prosperity of Greater China.

As an internationally renowned expert in iron and steel metallurgy, Professor Xu has received six national, ministerial, or Shanghai-based awards for major technological achievements and advances and is also a recipient of the Ho Leung Ho Lee Science and Technology Progress Award from Hong Kong. At the same time, he is an Honorary Member of the Iron and Steel Institute of Japan, an Honorary Fellow of the Royal Academy of Engineering of the United Kingdom, a Foreign Member of the National Academy of Engineering of the United States, a Foreign Member of the Russian Academy of Engineering Sciences, a Foreign Member of the Royal Swedish Academy of Engineering, and a Foreign Member of the Serbian National Academy of Engineering. In September 2006, in recognition of his distinguished contributions to the promotion of friendly relations between Sweden and China, he was made a Commander Grand Cross of the Swedish Order of the Polar Star.

In recognition of his distinguished achievements in metallurgy and the development of new materials, his outstanding contributions to the development of international engineering and higher education, and the brilliant leadership he provides for social progress, I feel greatly honoured to present to you, Mr Pro-Chancellor, Professor Xu Kuangdi for the conferment of the degree of Honorary Doctor of Engineering.