PRESIDENT'S SCIENCE & TECHNOLOGY MEDAL 2024

Ho Teck Hua
President,
Nanyang Technological University, Singapore

"For his profound impact on the science and technology landscape in Singapore, especially in nurturing a pipeline of top talent, fostering interdisciplinary research, and building national R&D ecosystems."

Professor Ho's contributions to Singapore's science and technology ecosystem have been wide-ranging, spanning research and innovation and enterprise. He has strived to make the National University of Singapore (NUS) and Nanyang Technological University, Singapore (NTU Singapore) top-ranked by transforming them into powerful talent magnets that draw both young and established researchers to Singapore.

At NUS, Professor Ho served two roles, as the deputy president of research and technology (2015-2018), and later, the senior deputy president and provost (2018-2023). The university saw remarkable growth and expansion during these years. In 2016, he was appointed the founding executive chairman of AI Singapore (AISG), to lead the nation's nascent efforts in artificial intelligence. Since 2019, Singapore has had the highest average quality of AI publications in the world. In 2023, he assumed the role of the fifth president of NTU and dramatically ramped up recruiting young talent at the university.

Professor Ho has contributed to the science and technology ecosystem in Singapore by:
1.   Nurturing a pipeline of top talent,
2.   Fostering interdisciplinary research, and
3.   Building national research and development ecosystems.

Professor Ho's most significant contribution to Singapore has been the creation of a pipeline of talent in science and technology. Professor Ho believes that NUS and NTU should be universities of choice for top academics and scientists who want to work in Asia. He transformed the hiring culture at both universities and raised the quality of hires. He believes that top talent hires other top talent, creating a cascading effect in recruitment. Therefore, his key strategy has been to provide a conducive environment in which top talent can thrive and succeed.

Professor Ho is a strong believer in interdisciplinary research. He led the creation of two interdisciplinary colleges: the College of Design and Engineering (CDE) at NUS, and the College of Computing and Data Science (CCDS) at NTU. CDE was a merger of the Faculty of Engineering and the School of Design and Environment, while CCDS was created to deepen NTU's strengths in AI, data science, and computing. Both colleges champion research that cuts across multiple disciplines.

Professor Ho believes in translating academic research into tangible solutions that benefit society. He created several corporate laboratories and forged multiple collaborations with universities and governments in China and ASEAN. Professor Ho conceived of the idea of the Graduate Research Innovation Programme (GRIP) at NUS; GRIP has since produced more than 100 start-ups. He also helped create a tripartite partnership between Temasek, NUS, and NTU, to develop a deep-tech incubator for the most promising start-ups.

Professor Ho led the creation and growth of AI Singapore (AISG). AISG is one of the largest national research and development programmes; its goal is to build a vibrant ecosystem to help realise Singapore's ambition of becoming a global, trusted AI hub. Since 2019, AI research publications produced in Singapore have had the highest average quality in the world. To produce a constant pipeline of AI talent, AISG launched a nine-month AI Apprenticeship Programme in 2017 and an AI PhD programme in 2020. The apprenticeship programme was a winner in the Talent Accelerator category at the 2019 IDC Digital Transformation Awards. AISG has launched several national grand challenges, in health, education, and transport. The Health Grand Challenge, for example, aims to provide scalable AI solutions to reduce the rate of complications arising from high blood pressure, high blood sugar, and high blood cholesterol by 20% in 5 years.

Before returning to Singapore, Professor Ho was a chaired professor at the University of California, Berkeley's Haas School of Business. In 2015, the Haas School presented him with the Williamson Award, the School's highest faculty award, named in honour of Oliver Williamson, recipient of the 2009 Nobel Memorial Prize in Economic Sciences. The award celebrates honourees who best reflect the character and integrity associated with Williamson's scholarly work and legacy.

Professor Ho is also the president of the Academy of Engineering, Singapore, and an academician of Academia Sinica. He sits on the boards of DSO National Laboratories, the Government Technology Agency, and the National Research Foundation. In 2023, he was awarded the Public Administration Medal (Gold) for his many, significant contributions to education.