

SUSTAINING MEMBER

THE CHINESE UNIVERSITY OF HONG KONG (CUHK)

Ranking 1st in Hong Kong, 5th in Asia and 42nd in the world under the Best Global Universities Rankings 2024-2025 of the U.S. News & World Report, the Chinese University of Hong Kong (CUHK) has long been a critically acclaimed tertiary institution that highly values research innovation and knowledge transfer. With a view to creating substantial impact beyond academia, much emphasis has been put in areas such as securing funding for translation of research innovations, promoting research and innovative excellence in different academic disciplines, as well as providing adequate intellectual property management and entrepreneurship activity support.

RAISe+ Scheme

The Research, Academic and Industry Sectors One-plus Scheme (RAISe+ Scheme) is a brand-new funding scheme launched by the Innovation and Technology Commission of the Hong Kong Government in October 2023. With an aim to assist local universities to transform and commercialize their research outcomes and to facilitate collaboration among the government, the academia and the industry, the RAISe+ Scheme provides funds, on a matching basis with a maximum funding of HK\$100 million (about US\$12.9 million) per approved project, to university research teams that have the potential to commercialize their research innovations and become successful start-ups.

A total of 7 CUHK research teams (5 from the Faculty of Engineering, 1 from the Faculty of Medicine, and 1 from the Faculty of Science) were received funding from the RAISe+ Scheme. The awarded research projects cover a wide array of domains, including 3D vision-driven robots, advanced surgical robotic platform, new network coding technology, design of silicon photonic chips, smart wearable medical devices, cartilage generation therapy and sustainable soybean cultivation for food security and environmental solutions. Prof. Raymond Yeung Wai-ho, who has been a NAI Fellow since 2022, was also awarded the RAISe+ funding for his BATched Sparse (BATS) code technology which can be applied in cellular networks, smart cities and data centres for faster, securer, more accurate and more environmentally friendly data transmission.

Aerospace & Polar Science Research

In the past year CUHK has spearheaded researches in the domains of aerospace innovation and polar science. In May 2023, CUHK initiated its first collaborative aerospace research project in relation to agriculture, in which selected nitrogen-fixing rhizobia samples and home-bred soybean cultivars were sent into China National Space Station via Tianzhou-6 cargo spacecraft and Shenzhou-16 crewed spacecraft, respectively, in order to explore potential mutagenesis under space conditions. The project is expected to bring about breakthroughs in agrobiotechnology that boost agricultural yield, improve soil fertility and reduce use of chemical nitrogen fertilizer, eventually benefiting the global community and opening new chapters for integration in aerospace and agricultural technology.

Equally exciting was the launch of the 'Hong Kong Youth Scientific Innovation' satellite, jointly developed by CUHK and ADA Space, into orbit in September 2024, aiming to collect environmental and geographical data to inform responses to global natural disasters, smart city building and carbon neutrality. The launch marked the birth of the first satellite developed by a tertiary institution in Hong Kong, and with CUHK being directly involved in the overall design, R&D and data reception stages, this would certainly be a significant milestone in our University's aerospace research.

With a view to fostering research collaborations in the fields of Antarctic and environmental sciences, CUHK and the Polar Research Institute of China (PRIC) has signed a Framework Agreement for Strategic Cooperation during



the China Symposium on Polar Science held in August 2024, and subsequently in November 2024, three CUHK professors have been honored to join China's Antarctic scientific expedition team, taking this once-in-a-lifetime opportunity to explore and scrutinize in Antarctica about organic matters, including carbon, mercury and microbial activities, trapped within Antarctic ice and effects of climate change on these matters.

IP Patents & Social Innovation Excellence

In 2023/2024, CUHK researchers and inventors have filed over 530 patents, with a total of 44 US utility patents and 349 global patents granted throughout the period, ranking 2nd in Hong Kong and 79th worldwide in NAI's rankings in Top 100 Worldwide Universities Granted U.S. Utility Patents 2023. CUHK has also been actively engaged in social innovation, supporting multitudinous community-based knowledge transfer projects via the Sustainable Knowledge Transfer Project Fund (S-KPF) and the Knowledge Transfer Project Fund (KPF).

CUHK's research innovation excellence in contributing to global sustainable development was ranked 2nd in Hong Kong by the Times Higher Education (THE)'s Impact Rankings for 2024. Also CUHK has been recognized as one of the top 50s of the most impactful universities around the world in terms of Partnerships for the Goals (UN SDG 17), lauding for its continuous endeavours in forging strong international partnerships to tackle global challenges such as climate change, inequality and poverty.

Entrepreneurship & Annual Innovation Events

CUHK commemorated the 10th anniversary of CUHK Entrepreneur Day in September 2024, showcasing how innovative solutions can illuminate our lives and address global challenges via a seven-day free public exhibition. Twenty-three CUHK teams (list of participating projects) exhibited their innovative projects in a range of cutting-edge fields, ranging from medical technology to artificial intelligence (AI), and from biotechnology to robotics. Equally vibrant was the CUHK Innovation Day, an annual celebratory event that has been held since 2020 to highlight the achievements of CUHK scholars, students and alumni in industry-academia-research collaborations. During the Innovation Day in 2023, CUHK Innovation Limited, a subsidiary company wholly owned by CUHK setting up a versatile platform with a syndicate of partner investors to support R&D and commercial activities of CUHK spin-offs, was formally launched. In 2024, the Innovation Day featured over 40 exhibitors who showcased innovative projects on carbon-neutral advanced materials, clean energy, AI and healthcare.