Role of the Hong Kong Young Academy of Sciences

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Introduction

The Hong Kong Academy of Sciences (ASHK), established in 2015, is Hong Kong's highest academic honour conferred by peer scientists to recognise the outstanding contributions of Hong Kong scientists. It currently has 38 renowned members.

ASHK's objectives include promoting science and technology (S&T) research, development, and talent nurturing, raising public awareness of S&T issues and fostering Hong Kong as a centre of scientific excellence. ASHK has gained an excellent reputation regionally and globally for advancing technological development and science popularisation.

The Hong Kong Young Academy of Sciences (YASHK) was founded in 2018 as a chapter of the ASHK. It builds on ASHK's strengths and networks to engage with academia, industry, and the public sector. YASHK aims to create a vibrant community of aspiring young scientists dedicated to serving the community, fostering scientific talents, and advancing science, technology, and innovation (STI). YASHK provides a platform for young voices, enabling the younger generation to contribute meaningfully to Hong Kong. Furthermore, it seeks to improve the research and education environment for S&T. For the advancement of education on a non-profit basis, YASHK aims to advance education, promote S&T development, enhance science teaching, and educate the public on issues pertaining to S&T.

Currently, YASHK has 53 members, and its membership will grow further through new elections. Their expansion will enhance its capacity for academic and societal influence. The Young Academy's enthusiastic members would inject fresh momentum into ASHK's work. Through active participation in international conferences and exchanges, YASHK members contribute to the global development of S&T. Details of their achievements are available on YASHK's Facebook and Instagram pages.

YASHK: Empowering Young Scientists for Scientific Advancement

YASHK plays a vital role in influencing policies and education in the field of S&T, acting as a bridge between young scientists and stakeholders. YASHK has formed five Sub-Committees to enhance operational efficiency.

The *Policy Advisory Committee* channels the views of YASHK members to relevant government departments, providing expert advice on matters concerning young scientists. The aim is to contribute to the research & development policies, such as the Hong Kong Innovation and Technology Development Blueprint promulgated in December 2022.



YASHK Founding Members Vic Law, Stephanie Ma and Anderson Shum as distinguished speakers at the Global I&T Summit 2022

The *Internal Affairs Committee* supervises and coordinates internal events within the academy. Its responsibilities include organising YASHK Members' Meetings and New Members' Election process. By doing so, the committee aims to strengthen the connection among members and commit to the thriving development of the academy.

The *Academic Committee* promotes the excellence of young scientists from Hong Kong and facilitates interactions between local and international counterparts. It is also involved in organising an upcoming international Summit series to be held in 2023-2024.

The *Industrial Partnership Committee* focuses on bridging the gap between academics and industrial parties. By collaborating with organisations such as the Hong Kong Young Industrialists Council, it facilitates the translation of research outputs and conducts Industry Workshops to introduce the latest scientific developments on topics such as AI, robotics, COVID-19, clean energy, advanced manufacturing technologies, etc.

YASHK's *Outreach Committee* strives to cultivate scientific and innovative talents in Hong Kong. It organises different science popularisation activities, collaborating with organisations like the Hong Kong Academy for Gifted Education and The Hong Kong Federation of Youth Groups, who share similar visions. For example, it hosts a workshop series called "How to Start a Research Project" for secondary 4 and 5 students, providing guidance and hands-on experience.

YASHK members lead the workshops with their relevant expertise on topics, including but not limited to how to start a research project and how to improve their analytical, planning, organising, and presentation capabilities. The workshop series includes sharing sessions by outstanding scientists, lab visits, science competitions, and scientific forums.

Besides, YASHK also supports ASHK programmes designed to nurture future talents. These programmes include the Distinguished Master Accomplished Students (DMAS) Mentorship Program and the S.T. Yau High School Science Award (Asia) [YHSA (Asia)].

The DMAS Mentorship Programme, co-organised by ASHK, the Hong Kong Academy of Engineering Sciences, and the Hong Kong Institution of Science, is launching its fifth cohort in 2023, following the success of the previous editions. The Programme aims to provide Hong Kong students with valuable exposure to current scientific and technological developments while nurturing their talents. Through a one-year

mentorship, experienced professionals, including YASHK members, share their real-world experiences and industry knowledge with students. The mentors inspire and guide students, offering advice to help them unleash their potential and realise their ambitions.

YHSA (Asia) is a prestigious regional research competition held in Hong Kong, co-organised by ASHK, Yau Mathematical Sciences Center of Tsinghua University, and The Institute of Mathematical Sciences of The Chinese University of Hong Kong. The competition attracts participants from Hong Kong and the entire Asian region, excluding Mainland China.

Secondary students participating in YHSA (Asia) submit their research report showcasing their advanced level of research beyond the general education requirements. Additionally, they present their work in an oral defence session before Assessment Panels, some of which include YASHK members. The winning teams earn the opportunity to compete in the YHSA Finale held in Beijing, where they compete against teams from Mainland China and other countries.

Through their initiatives, YASHK actively promotes S&T, encourages practical learning experiences, fosters a spirit of scientific inquiry and contributes to the growth of Hong Kong's scientific community.

YASHK's Global Connections

YASHK is expanding its impact and collaboration with similar academies in the Greater Bay Area, Mainland China and overseas regions through a series of summits called "The Young Academy of Sciences Summits". These summits aim to provide a unique platform for young local academics and scientists to connect, engage, and exchange ideas with their counterparts from around the world. The goal is to stimulate cross-disciplinary, cross-cultural, and cross-institutional cooperation in Hong Kong.

To develop and strengthen international connections, esteemed academies like the UK Young Academy, Global Young Academy, and Young Academy of Europe will be invited to participate in the summits. This initiative aims to foster collaboration among scientists and academics who share a common vision and passion for S&T, enabling them to work with YASHK members and scholars in Hong Kong.

With most members having overseas study experiences, YASHK serves as a unique group of ambassadors poised to share knowledge, contribute expertise, and enhance the development of S&T in Hong Kong, the Greater Bay Area, and beyond. By connecting different regions, YASHK members bridge the gap between local and international scientific communities, fostering collaboration and promoting scientific progress for the benefit of humanity.

In conclusion, YASHK plays a crucial role in promoting scientific research, innovation and fostering the next generation of scientists. By providing a platform for young scientists to connect, learn, and engage with the broader scientific community, the academy is shaping the future of science. Through its diverse initiatives, programmes, and outreach efforts, YASHK ensures that science continues to drive positive change in the world, creating a brighter future through the advancement of knowledge and technology.