YOUNG ACADEMY OF SCIENCES SUMMIT
青年科學家峰會

PROGRAMME BOOKLET
2024-2025

科學領航 啟迪未來
SCIENCE, THE PORTAL TO NEW ENLIGHTENMENTS

Organiser: THE HONG KONG YOUNG ACADEMY OF SCIENCES 香港青年科學院

Co-organiser:

大灣區共同家園投資有限公司 Greater Bay Area Homeland Investments Limited

大灣區共同家園青年公益基金 Greater Bay Area Homeland Youth Community Foundation

Funding organisation:

創新科技署 Innovation and Technology Commission

Any opinions, findings, conclusions or recommendations expressed in this material/event (or by members of the project team) do not reflect the views of the Government of the Hong Kong Special Administrative Region, the Innovation and Technology Commission or the General Support Programme Vetting Committee of the Innovation and Technology Fund.

Local academic partner

香港城市大學 City University of Hong Kong

香港都會大學 科技學院 Hong Kong Metropolitan University School of Science and Technology

PEAK Member of VTC Group

Lingnan 嶺南大學 University 香港 Hong Kong

香港中文大學 The Chinese University of Hong Kong

The Hong Kong Polytechnic University 香港理工大學

香港科技大學 The Hong Kong University of Science and Technology

The University of Hong Kong Technology Transfer Office 香港大學技術轉移處

Supporting organisation

ASTRI Hong Kong Applied Science and Technology Research Institute 香港應用科技研究院

數碼港 Cyberport 20

香港科技園 HKSTP

香港青年工業家協會 Hong Kong Young Industrialists Council

(Listed in alphabetical order)

CONTENT

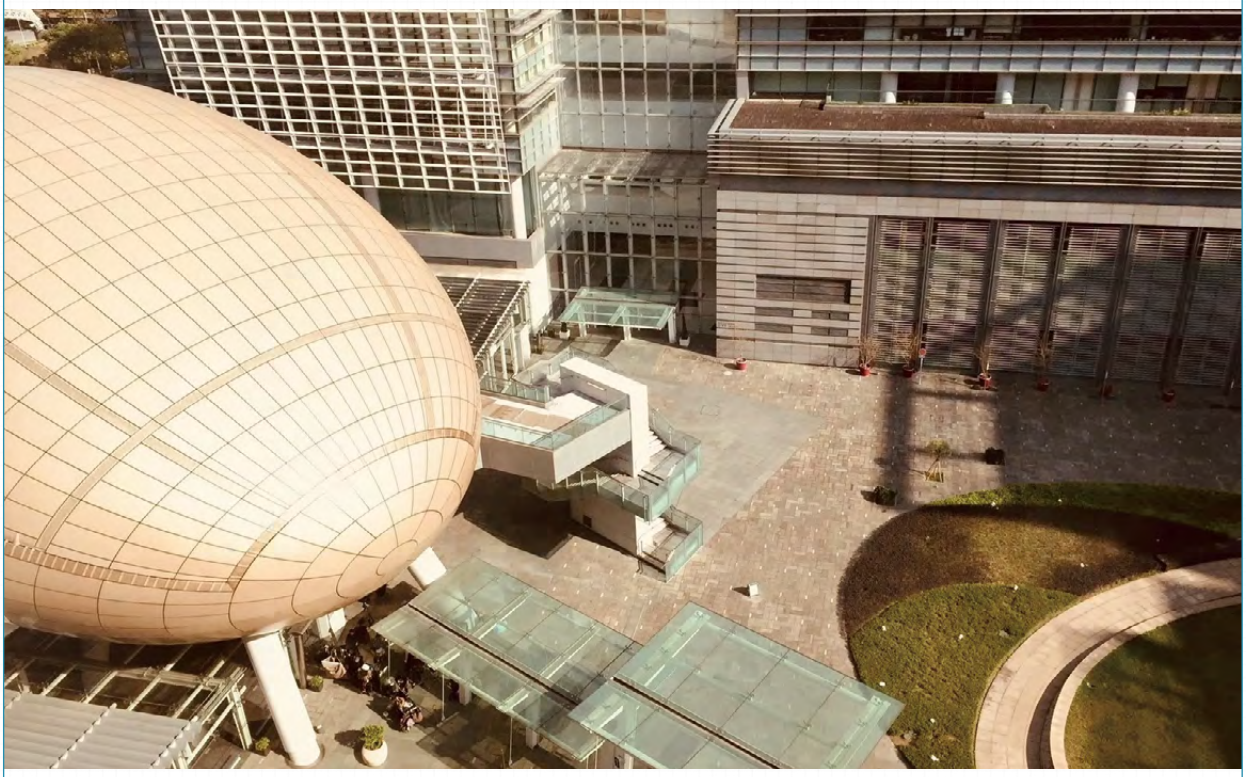
01

科學領航 啟迪未來
SCIENCE, THE PORTAL
TO NEW ENLIGHTENMENTS

YOUNG ACADEMY OF SCIENCES SUMMIT
青年科學家峰會

ABOUT YASS

- Showcases the excellent research work of the young scientists in Hong Kong.
- Provides a unique platform for local young academics and scientists to gather and engage in a cross-disciplinary, cross-cultural and cross-institutional cooperation in Hong Kong.
- Demonstrates Hong Kong's unique position as a strong and energetic research base, well prepared for any knowledge transfer collaborations.



ABOUT THE ORGANISER

THE HONG KONG YOUNG ACADEMY OF SCIENCES
香 港 青 年 科 學 院

The Hong Kong Young Academy of Sciences

The Hong Kong Young Academy of Sciences (YASHK) was established in 2018 and is a chapter of The Hong Kong Academy of Sciences (ASHK). YASHK offers a strong platform for young scientists to make meaningful contribution to the Hong Kong community and build up a better research and education environment for science and technology. Currently, YASHK has 61 young scientists as its Members.

https://yashk.org.hk

ABOUT CO-ORGANISERS

大灣區共同家園投資有限公司
Greater Bay Area Homeland Investments Limited

Greater Bay Area Homeland Investments Limited

The Greater Bay Area Homeland Investments Limited was jointly established by international large-scale industrial institutions, financial institutions and new economic enterprises. Greater Bay Area Homeland Development Fund is set up under the Company to grasp the historical opportunities of the development of Guangdong-Hong Kong-Macao Greater Bay Area, and the construction of an International Innovation and Technology Hub, focusing on technological innovation, industrial upgrading, quality of life, smart city and all other related industries. The Company and the Fund cover venture capital, private equity investment, listed company investment, M&A investment and so on to offer financial support for outstanding entrepreneurs and enterprises, connecting industrial and financial resources, achieving long-term returns for shareholders and investors, and contributing positively to economic and social development.

http://www.gbahomeland.com/

大灣區共同家園青年公益基金
Greater Bay Area Homeland Youth Community Foundation

Greater Bay Area Homeland Youth Community Foundation

Founded in September 2019, the Greater Bay Area Homeland Youth Community Foundation (the "Foundation") is a charitable organisation that was established to leverage the enormous growth opportunities made possible by the Greater Bay Area concept. Guided by its mission of "For Our Youth For Our Future", the Foundation is a joint effort by young leaders from all walks of life to support Hong Kong youths in their studies, careers and entrepreneurship. Taking education and training as its focus, the Foundation hopes the work will enable young people to gain a better understanding of the region’ s business environment and culture that is conducive to their personal and professional growth.

https://www.gbayouth.org.hk/

ABOUT THE FUNDING ORGANISATION

創新科技署
Innovation and Technology Commission

政府資助計劃
Government-funded programme

Innovation and Technology Commission

To promote the development of innovation and technology, an Innovation and Technology Commission (ITC) was set up on 1st July 2000, with the mission to spearhead Hong Kong' s drive to become a world-class, knowledge-based economy. The Commission formulates and implements policies and measures to promote innovation and technology; supports applied research, technology transfer and application; promotes technological entrepreneurship; facilitates the provision of technology infrastructure and development of human resources; and promotes internationally accepted standards and conformity assessment services to underpin technological development and international trade. The Commission works closely with its partners in the Government, industry, business, tertiary education institutions and industrial support organisations.

YASS ACTIVITY OVERVIEW

02

1st YASS SUMMIT

December 2023

Sub-Conference I
March 2024

Sub-Conference II
May 2024

Sub-Conference III
September 2024

2nd YASS SUMMIT

December 2024

Sub-Conference IV
February 2025

Sub-Conference V
April 2025

Sub-Conference VI
June 2025

MEMBERS OF THE PROGRAMME COMMITTEE

03

The Programme Committee provides general oversight and advice to the YASS 2023/24 & 2024/25.

Prof. Anderson SHUM
City University of Hong Kong

Prof. Stephanie MA
The University of Hong Kong

Prof. Minhua SHAO
The Hong Kong University of Science and Technology

Prof. Kathy Oi Lan LUI
The Chinese University of Hong Kong

Prof. Zijian ZHENG
The Hong Kong Polytechnic University

Prof. Johnny HO
City University of Hong Kong

Prof. Zhifeng HUANG
The Chinese University of Hong Kong

Prof. Timothy BONEBRAKE
The University of Hong Kong

Prof. Yang CHAI
The Hong Kong Polytechnic University

Prof. Fuk Yee KWONG
The Chinese University of Hong Kong

Prof. Shih-Chi CHEN
The Chinese University of Hong Kong

Prof. Giulio CHIRIBELLA
The University of Hong Kong

Prof. Kai LIU
The Hong Kong University of Science and Technology

Prof. Dangyuan LEI
City University of Hong Kong

Prof. Ken LEUNG
Hong Kong Baptist University

Prof. Zuankai WANG
The Hong Kong Polytechnic University

Prof. Amos TAI
The Chinese University of Hong Kong

Prof. Joelle WANG
Hong Kong Baptist University

YASS (2024-2025)
PROGRAMME RUNDOWN

04

13 DECEMBER 2024 (FRIDAY)

Time: 09:00 – 18:00
Venue: Charles K. Kao Auditorium, Hong Kong Science Park

08:30 - 09:00 **Registration**

09:00 - 09:20 **OPENING CEREMONY**

Welcome Message

Anderson SHUM
President, The Hong Kong Young Academy of Sciences

Opening Remarks

Dong SUN
Secretary for Innovation, Technology and Industry, HKSARG

Dennis LO
President, The Hong Kong Academy of Sciences

09:20 - 11:00

SESSION 1

How Young Scientists can Contribute to the Long-term Public Policies

Speakers

Topic | Be Impactful - How Young Scientists may Contribute to Long-Term Policies and Humanity in the Post-Truth World and Fragmented Societies

Alfred Tat-Kei HO

Dean of the College of Liberal Arts and Social Sciences,
City University of Hong Kong

Topic | From Talent to Impact: UKRI's Strategic Approach to Young Scientists Development

Daniel BROOKER

Director, UK Research and Innovation China Office

Topic | Why Young Scientists Should Contribute to the Long-term Public Policies

Jahangir ALOM

Co-chair, UK Young Academy

Panel Discussion

Moderators

Chunkit KWOK

Co-chair, Policy Advisory Committee,
The Hong Kong Young Academy of Sciences;
Associate Professor, Department of Chemistry,
City University of Hong Kong

Esther Wai Yin CHAN

Member, The Hong Kong Young Academy of Sciences;
Professor, Department of Pharmacology and Pharmacy,
Li Ka Shing Faculty of Medicine, The University of Hong Kong

Panelists

Alfred Tat-Kei HO
Daniel BROOKER
Jahangir ALOM

11:00 - 13:00

SESSION 2

Translating and Commercialising Deep-tech Solutions from Universities

Speakers

Topic | From Science Park to InnoPark

Carmen FUNG

Associate Director, Advanced Manufacturing and Microelectronics, Hong Kong Science and Technology Parks Corporation

Topic | From Lab to Market: Perspective on Translating Deep Tech into Real World Solutions

Rebecca LIM

CFO of Robocore Technology

Topic | Innovation, the new currency of competition

Benoît DUBUIS

President, Swiss Academy of Engineering Sciences

Topic | Innovation-driven and digital Transformation shape future of emerging industries

Rongping MU

President, The Chinese Association of Science of Science and S&T Policy Research

Topic | The urgent needs of innovation on traditional manufacturing technologies and commercialisation

Jianguo LIN

Head and Professor in Mechanics of Materials Division, Department of Mechanical Engineering, Faculty of Engineering, Imperial College London, United Kingdom

Panel Discussion

Moderator

Mingxin HUANG

Founding Member, The Hong Kong Young Academy of Sciences; Head of Department and Chair Professor at Department of Mechanical Engineering, The University of Hong Kong

Panelists

Carmen FUNG
Rebecca LIM
Benoît DUBUIS
Rongping MU
Jianguo LIN

13:00 - 14:10

LUNCHEON

(by invitation)

14:10 - 15:50

SESSION 3

Success Stories of How Young Academies Groom Young Scientists into World-Class Academicians

Speakers

Topic | Catalyzing Change: Leadership, Innovation, and Research Excellence in Southeast Asia through Young Scientists Network

Lay Ching CHAI

Co-chair, ASEAN Young Scientists Network

Topic | Collaboration is key to success: My personal experience

Yong-Guan ZHU

Director General, Research Center for Eco-environmental Sciences, Chinese Academy of Sciences

Topic | Forging the Future: Opportunities and Challenges for Thailand's Next Generation of Scientists

Udom SAE-UENG

Co-chair, Thai Young Scientists Academy

Panel Discussion

Moderators

Minhua SHAO

Executive Committee Member,
The Hong Kong Young Academy of Sciences;
Head and Chair Professor,
Department of Chemical and Biological Engineering,
The Hong Kong University of Science and Technology

Zhifeng HUANG

Co-chair, Academic Committee,
The Hong Kong Young Academy of Sciences;
Associate Professor,
Department of Chemistry,
The Chinese University of Hong Kong

Panelists

Lay Ching CHAI
Yong-Guan ZHU
Udom SAE-UENG

15:50 - 16:10 **Coffee break**

16:10 - 17:50

SESSION 4

Interventions to Promote and Popularize Science in Schools

Speakers

Topic | Advocacy for STEAM Education

Chung Po WONG

Associate Director (Programme),
The Hong Kong Academy for Gifted Education

Topic | Role of Young Academies to Promote, Propagate and Popularize Science in Schools

Chandra Shekhar SHARMA

Co-chair, Global Young Academy

Topic | Cultivating a passion for scientific inquiry

Che Ting CHAN

Chair, Committee on Science Popularisation,
The Hong Kong Academy of Sciences

Panel Discussion

Moderators

Stephanie MA

Vice-President, Co-chair, Outreach Committee,
The Hong Kong Young Academy of Sciences;
Jimmy and Emily Tang Professor in Molecular Genetics,
School of Biomedical Sciences, Li Ka Shing Faculty of Medicine,
The University of Hong Kong

Denvid LAU

Co-chair, Outreach Committee,
The Hong Kong Young Academy of Sciences;
Professor, Department of Architecture and Civil Engineering, CityU;
Associate Director, CityU Academy of Innovation

Panelists

Chung Po WONG
Chandra Shekhar SHARMA
Che Ting CHAN

17:50 - 18:00

CONCLUDING REMARKS

Anderson SHUM

President, The Hong Kong Young Academy of Sciences

18:30

BANQUET

(by invitation)

SPEAKER PROFILE

Anderson SHUM

President, The Hong Kong Young Academy of Sciences

Ir Prof. Anderson Ho Cheung SHUM received his Ph.D. and S.M. degrees in Applied Physics from Harvard University and B.S.E. degree (summa cum laude) in Chemical Engineering from Princeton University. He is currently Vice-President (Research) of City University of Hong Kong (CityUHK). He also serves as the Chair Professor of Chemical and Biomedical Engineering in the Department of Chemistry and Department of Biomedical Engineering of CityUHK. Previously, he served as Associate Vice-President (Research and Innovation) (2021-2024), Full Professor (Tenured) (2019-2024), Associate Head (2020-2021) in the Department of Mechanical Engineering, and Assistant Dean (2018-2020) in the Faculty of Engineering at University of Hong Kong (HKU). His research interests include aqueous two-phase systems, emulsions, biomicrofluidics, biomedical engineering, and soft matter.

Prof. Shum is highly recognized for his pioneering contributions, receiving international scientific honors including but not limited to: The 15th Guanghua Engineering Science and Technology Prize by Chinese Academy of Engineering (CAE, 2024), Awardee of RGC Senior Research Fellow Scheme (SRFS, 2024), Gold Medal and International Special Award in 8th International Invention Innovation Competition in Canada (iCAN, 2023), Gold Medal in 48th International Exhibition of Inventions (Geneva, Switzerland, 2023), the inaugural Hong Kong Engineering Science and Technology (HKEST) Award by the Hong Kong Academy of Engineering (HKAE, 2023), NSFC Excellent Young Scientist Fund (2019), IEEE Nanomed New Innovator (2018), HKU Outstanding Young Researcher Award (2016-17), HKU Research Output Prize (2017), and Early Career Award by the Research Grants Council of Hong Kong (2012). First in Hong Kong, Prof. Shum has been selected as Global Young Academy Member (since 2021).

He was also selected as Young Fellow of Hong Kong Academy of Engineering (2024); Fellows of the International Association of Advanced Materials (FIAAM, 2023), Hong Kong Institution of Engineers (FHKIE, 2023), Royal Society of Chemistry (FRSC, 2017); Awardee of Croucher Senior Research Fellowship (2020); and as President (since 2021) and Founding Member (since 2018) of Hong Kong Young Academy of Sciences. He currently serves as Editor-at-large for Droplet by Wiley; Editorial Board Member for Scientific Reports (Springer Nature), and Colloids and Interfaces by MDPI AG; as well as Editorial Advisory Board Member for Lab-on-a-Chip (RSC) and Associate Editor for Biomicrofluidics (American Institute of Physics).

Dong SUN

Secretary for Innovation, Technology and Industry, HKSARG

Professor Dong SUN was appointed as the Secretary for Innovation, Technology and Industry on 1 July 2022.

Professor Sun is a world-renowned scholar and scientist. He is a pioneer in robotic manipulation of biological cells and robot control. His research has led to breakthroughs in the use of robotics combined with various micro-engineering tools. He has also received numerous awards.

Professor Sun was elected as Fellow of Canadian Academy of Engineering, Member of the European Academy of Sciences and Arts, Fellow of the International Academy of Medical and Biological Engineering, Fellow of IEEE, and Fellow of ASME.

Prior to his appointment, Professor Sun was the Chair Professor and Head of the Department of Biomedical Engineering at City University of Hong Kong, and the Legislative Council Member (Election Committee).

Dennis LO

President, The Hong Kong Academy of Sciences

Dennis Lo is the Director of the Li Ka Shing Institute of Health Sciences, the Li Ka Shing Professor of Medicine and Professor of Chemical Pathology of The Chinese University of Hong Kong (CUHK). He is also the Associate Dean (Research) of the Faculty of Medicine of CUHK. Dennis Lo received his Bachelor of Arts degree from the University of Cambridge and the Doctor of Medicine and Doctor of Philosophy degrees from the University of Oxford.

Following his training at Oxford, he was appointed as the University Lecturer in Clinical Biochemistry and Honorary Consultant Chemical Pathologist at the John Radcliffe Hospital, the teaching hospital of the University of Oxford Clinical School. He was also a Fellow at Green College, Oxford.

Dennis Lo returned to Hong Kong in 1997. In the same year, he discovered the presence of fetal DNA in maternal plasma. His group has since remained at the forefront of this field. His group was the first to report the presence of cell-free fetal RNA and fetal epigenetic markers in maternal plasma and pioneered the use of such markers for noninvasive prenatal diagnosis. Dennis Lo and his colleagues were also the first to show that cell-free fetal nucleic acids in maternal plasma could be used for the noninvasive prenatal diagnosis of fetal trisomy 21 and had devised multiple solutions for this hitherto difficult diagnostic problem, including methods based on plasma RNA-SNP allelic ratios, plasma epigenetic markers, digital PCR and massively parallel DNA sequencing. With the use of massively parallel sequencing and the development of novel bioinformatics strategies, Dennis Lo' s group succeeded at deciphering a genome-wide genetic map of the fetus through the analysis of the small amounts of fragmented DNA floating in the blood of pregnant women. This scientific achievement lays the foundation for developing non-invasive prenatal diagnostic tests for multiple genetic diseases.

In the area of cancer detection, Dennis Lo has pioneered a number of approaches to cancer liquid biopsy, especially for the detection of nasopharyngeal carcinoma and genomewide approaches for screening multiple types of cancer.

In recognition of his work, Dennis Lo has been the recipient of numerous awards, including the King Faisal International Prize in Medicine in 2014, the Future Science Prize - Life Science Prize in 2016 and the 2021 Breakthrough Prize in Life Sciences. He was elected as a Fellow of the Royal Society in 2011, as a Foreign Associate of the US National Academy of Sciences in 2013 and as a Founding Member of The Hong Kong Academy of Sciences in 2015.

Alfred Tat-Kei HO

Dean of the College of Liberal Arts and Social Sciences, City University of Hong Kong

Professor Ho is a leading scholar in public administration, especially in the subfields of performance management and budgeting, e-government, and citizen engagement. He has actively pursued multi-disciplinary research and has extensive research partnerships in Asia, Europe, and the U.S. He also advocates the importance of engaged research and believes that public administration research should strive to inform practice and be socially relevant and impactful. Many of his publications are the results of academic-practitioner collaboration and community engagement, including collaboration with different local governments in the U.S. and China and with different national and international organizations, such as the China Development Research Foundation and the Asian Development Bank.

Prior to returning to Hong Kong, where he was born and grew up, Professor Ho has taught at various academic institutions in the U.S. Professor Ho also has had extensive leadership experience within the university and in his professional field. Besides being a program director at two different academic institutions and leading various university and school initiatives, he was the Secretary of the Association of Budgeting and Financial Management (ABFM) in 1999-2000, a founding member and the President of the China-America Association of Public Affairs (CAAPA) in 2011-2012, and an elected member of the National Council of the American Society of Public Administration in 2015-2018. In 2017-2020, he was also an Associate Editor of Public Performance and Management Review. Since 2019, he has been an Associate Editor of Journal of Public Budgeting, Accounting & Financial Management.

Professor Ho is a committed teacher. He has received teaching awards in all three academic institutions before joining the faculty of City University of Hong Kong. In 2018, his contributions to student learning and his impacts on student development and local communities were recognized by the Leslie A. Whittington Excellence in Teaching Award by the Network of Schools of Public Policy, Affairs, and Administration (NASPAA), the international accreditation authority of public administration and public affairs programs based in the U.S.

Daniel BROOKER

Director, UK Research and Innovation China Office

Dr Daniel Brooker is the UK Research and Innovation (UKRI) Director leading the research and innovation engagements with China.

He directs the expert team in Beijing that leads on developing relationships with China' s national and regional research and innovation funding agencies, including the National Natural Science Foundation of China, Ministry of Science and Technology and Chinese Academy of Sciences – to facilitate joint UK-China research and development programmes.

Daniel brings expertise and experience of having worked internationally across government, private and non-profit sectors. He worked with China in prior roles as an academic at Peking University where he taught economic geography and regional development. He worked in Cambridge University for Cambridge University Press and Assessment where he led a consultancy team providing advice to governments on education reform. He has also worked for SQW and RAND Corporation leading policy and consultancy projects in the science and innovation space. He worked with a range of partners including the World Bank, OECD, European Commission and UK Government Departments. He has published internationally and presented at conferences on research, innovation and economic development themes.

Jahangir ALOM

Emergency Medicine Doctor, Barts Health NHS Trust, London

Executive Group Member, UK Young Academy, London

Board Member, Institute of Public Policy Research, London

Governing Board Member, Stepney All Saints School, London

Programme Director, Selfless Charity, London/ Sylhet

Recipient of the British Empire Medal (BEM), for services to tackling health inequalities

Recipient of the NHS Parliamentary Award (London)

Alumni Award, University of Southampton, UK

Jahangir graduated from the University of Southampton Medical School with the Dean' s Prize for Outstanding Contribution to the Faculty of Medicine and holds an MSc in Public Health from the London School of Hygiene and Tropical Medicine. During the early stages of his career, Jahangir set up an organisation that encouraged and mentored young people from underrepresented backgrounds to consider a career in the NHS. He has worked with the UK Medical Schools Council and Health Education England (now NHS England) to improve widening participation in medicine.

Jahangir is the Programme Director of an international charity, Selfless UK, which delivers evidence-based global health projects in rural Bangladesh.

During the COVID-19 pandemic, Jahangir was appointed to the Chief People Officer' s clinical advisory group and later joined NHS England as the National Clinical Lead for the Staff COVID-19 Vaccination Programme. In this role, he delivered the engagement strategy that saw over 147,000 of the most hesitant healthcare workers take up the vaccine. Jahangir then joined the Health Council at REFORM think tank to support their work on 'reimagining health' .

Jahangir has spent a 4-year term on the British Medical Association' s (BMA) Council and has also been elected to several sub-committees, including the Equality, Diversity and Inclusion Group and the Junior Doctors Committee. He continues to lobby for better work conditions for minority ethnic doctors.

Jahangir is an expert in health inequalities and has provided commentary on BBC Newsnight, BBC News, BBC Question Time, SkyNews, Channel 4 and CNN.

He has been ranked as one of the top 100 healthcare leaders in 2022 by the HSJ and is a recipient of the NHS Parliamentary Award.

Chunkit KWOK

Associate Professor, Department of Chemistry, State Key Laboratory of Marine Pollution, Shenzhen Research Institute, City University of Hong Kong

Co-Chair, Policy Advisory Committee, The Hong Kong Young Academy of Sciences (YASHK)

Asian RNA Research Ambassador, RNA Society

Dr. Kwok joined CityU in 2016 as an Assistant Professor, becoming Associate Professor in 2021. He received the CityU President's Award and Croucher Innovation Award in 2019, joined the State Key Laboratory of Marine Pollution in 2020, and was elected to YASHK and recognized as a Rising Star in Chemistry in 2021. In 2022, he was awarded the NSFC Excellent Young Scientist Fund. (優青 (港澳)).

Dr. Kwok's research focus is to explore the role of RNA structures and interactions in biology, especially the functions of G-quadruplex structures/interactions and non-coding RNA structures/interactions in the mammalian transcriptome and their relevance to gene regulation, RNA metabolism and diseases. Two new research directions in the Kwok lab are to develop targeting tools for detection, imaging, intervention of these important RNA structures and interactions, as well as to invent innovative nucleic acid-based technologies for sensing chemical pollutants and pathogens.

To cultivate a stimulating learning environment for students and to establish RNA community in Hong Kong, Dr. Kwok, together with Dr. Minh Le, has also founded the Hong Kong RNA Club in Aug 2017 and organized RNA seminar and symposium events regularly.

Esther Wai Yin CHAN

Professor, Department of Pharmacology and Pharmacy;

Assistant Dean (Health Sciences Education), LKS Faculty of Medicine (HKUMed);

Research Lead, Centre for Safe Medication Practice and Research (CSMPR), The University of Hong Kong

Professor Chan's research interests include medication safety and effectiveness, utilising big data for population-based studies. She leads multicentre interventional clinical trials and has built global research networks that utilise electronic health records to connect Asia and the world. In 2012, she became a founding member and Research Lead of the Centre for Safe Medication Practice and Research (CSMPR), with a vision to improve health outcomes through interdisciplinary collaborative research that addresses crucial questions related to medication safety and effectiveness. Her research on managing acute agitation in emergency departments directly impacted clinical practice, leading to additional drug and dosing recommendations in the Australian Therapeutic Guidelines and the Hong Kong Hospital Authority drug formulary.

Professor Chan led research on the safety and effectiveness of COVID-19 vaccines to facilitate informed decision-making on vaccine uptake, contributed to the establishment of the Central Dilution procedures for vaccine preparation and developed online training programs for healthcare professionals.

As Assistant Dean (Health Sciences Education), Professor Chan oversees the teaching and learning of health science disciplines including Biomedical Sciences, Chinese Medicine, Nursing and Pharmacy. In addition, she actively promotes inclusive practice at residential halls and for students with Special Education Needs (SEN).

Carmen FUNG

Associate Director, Advanced Manufacturing and Microelectronics,
Hong Kong Science and Technology Parks Corporation

Dr. Carmen FUNG has more than 15 years of research experience, both in Hong Kong and in USA, in design and fabrication of micro-devices and micro-sensors using nanostructural materials. She is now working as an Associate Director at the Innofacturing Division at Hong Kong Science and Technology Parks Corporation and is working closely with partner companies to drive the Innovation and Technology ecosystem in Hong Kong especially in the area of advanced manufacturing and microelectronics.

She was a postdoctoral research associate at Michigan State University, USA and actively involved in various research projects including developing a nano-sensor array and also fabricating a biocompatible and flexible polymer micro-mesh with a high density of small holes to mechanically immobilize living cell junctions and protein structures during AFM imaging. The related research work was nominated as the Best Conference Paper in IEEE International Conference on Nano/Micro Engineered and Molecular Systems (IEEE NEMS).

She has authored/co-authored more than 50 professional journals, conference papers and book chapters on her research work. Her research findings were nominated as the Best Conference Paper in international conferences.

Rebecca LIM

CFO of Robocore Technology

Rebecca Lim is a seasoned professional with expertise in finance, AI, and corporate leadership. She is currently the CFO of Robocore, where her financial acumen and leadership are driving seamless integration following the company' s 2024 merger.

Also as the founder and CEO of AutoML Capital, a leading WealthTech firm, Rebecca has pioneered the use of machine learning in asset management. Her leadership earned AutoML Capital multiple accolades, including the Hong Kong FinTech Impetus Award, the IFTA Gold Award for WealthTech, and the ICT Award in 2022.

Rebecca holds a Master of Physics degree from the University of Oxford, where she specialised in Atmospheric and Particle Physics. She spent over a decade in Sales & Trading and Private Banking across Hong Kong and London, focusing on market risks and portfolio management. In 2017, she co-founded Automated Machine Learning, leading the development of the patented AI engine, "ML Brain."

Rebecca is also a recognised speaker, educator, and advocate for tech talent development. Awarded the Hong Kong Professional Elite Ladies Selection Award and Young Women Engineer of the Year, she continues to drive innovation in AI, WealthTech, and robotics, leaving a profound impact on the industry and community.

Benoît DUBUIS

President of the Swiss Academy of Engineering Sciences

Benoît Dubuis is President of the Swiss Academy of Engineering Sciences (SATW) and Chairman of the Inartis Foundation, which manages various programs to support innovation and entrepreneurship, including the Clefs du Savoir, MassChallenge, Espace Création and UniverCité/Station R editions.

Benoît Dubuis has over 30 years' international experience in the life sciences, both in industry and academia. An EPFL chemical engineer with a doctorate from ETH Zurich, he held various management positions in pharmaceutical companies (Chemap, Ciba-Geigy/Novartis, Lonza), before joining EPFL, where he founded the Life Sciences faculty and was its first dean.

In 2004, he co-founded the seed capital fund Éclosion in Geneva, and went on to found Excellgene, GenKyoTex and GeNeuro, the last two of which are listed on the stock exchange. In June 2013, he was appointed Director of Development at the Wyss Center and Director of the Campus Biotech Foundation, a position he left 10 years later to devote to the Inartis Foundation and the Swiss Academy of Engineering Sciences, of which he has been President since 2021.

Benoît Dubuis is Professor at the Faculty of Medicine, University of Geneva and Dean of the SSIAT at the Shanghai University.

Rongping MU

President, The Chinese Association of Science of Science and S&T Policy Research

Mr. Mu Rongping, B.S. and M.S. from University of Science and Technology of China, and PhD from Technical University Berlin of Germany. Dr. Mu is now Professor of Institutes of Science and Development, Chinese Academy of Sciences, President of The Chinese Association of Science of Science and S&T Policy Research (over 10000 memberships in China), editor-in-Chief of the Journal of Science Research Management, the founding editor-in-Chief of the Journal of Innovation and Development Policy (English Journal). Dr. Mu was the director-general (2004-2014) at CASIPM, the Dean of the School of Public Policy and Management of University of Chinese Academy of Sciences, President of China High-tech Industry Promotion Society. Dr. Mu is a member of working party on Innovation and Technology Policy of OECD.

Dr. Mu has more than 30 years research experiences in the fields S&T and Innovation Development Policy, Technology Foresight, International Competitiveness of Hi-tech Industry. He has taken more than 40 key projects and engaged in policymaking process related to the National Innovation Capacity-building, the National Strategic Emerging Industry Development and the Policy for Stimulating & Supporting Enterprise to Become Innovator and Plans for National Innovative City Development as well as Science City Development.

Jianguo LIN

Head and Professor in Mechanics of Materials Division, Department of Mechanical Engineering, Faculty of Engineering, Imperial College London, United Kingdom

Jianguo Lin, FREng, FIMechE, FIMMM, FISME, CEng, PhD, is a Professor in Materials Technologies, Department of Industrial and Systems Engineering, Hong Kong Polytechnic University (PolyU). He obtained his PhD in Mechanical Engineering Department of the University of Sheffield, UK, in 1991.

He is a Fellow of Royal Academy of Engineering (FREng) and joined PolyU from Imperial College London in September 2024. Professor Lin established a Metal Forming and Materials Modelling Group at Imperial in 2008, which has 4 research centres and 2 joint research Labs fully funded by industry, and, has an international reputation in developing new metal forming techniques, multiscale materials and process modelling theories.

His research expertise is in Metal forming, Materials and Process Modelling. He has published over 300 research papers in refereed international journals and over 20 patents, most of which have been taken by industry. He is a Founder and Director of three Imperial spin-off companies (Impression Technologies Ltd, CurvEx Technology Ltd and Multi-X Solutions Ltd), which are resulted from his patented techniques.

Mingxin HUANG

Founding Member, The Hong Kong Young Academy of Sciences;

Head of Department and Chair Professor at Department of Mechanical Engineering, The University of Hong Kong

Prof. HUANG Mingxin is currently Head of Department and Chair Professor at Department of Mechanical Engineering, The University of Hong Kong. Prof. Huang works on development of high-performance alloys, and has been ranked by Clarivate Analytics in the top 1% worldwide by citations in the field of Materials Science. Prof. Huang was awarded Xplorer Prize, Croucher Senior Research Fellowship, Changjiang Scholar Chair Professor, National Science Fund for Distinguished Young Scholars, Hong Kong Engineering Science and Technology Award, and elected as member of The Hong Kong Young Academy of Sciences.

Lay Ching CHAI

Co-Chair of The ASEAN Young Scientists Network

Prof. Chai Lay Ching is the Pro Vice-Chancellor (Education) at Sunway University, providing strategic leadership to advance innovative teaching, learning, and assessment practices. Joining in 2023 after 13 impactful years at the University of Malaya, she drives global education initiatives, integrating technology-enhanced learning and spearheading online and open distance learning advancements.

An internationally recognized food microbiologist and expert in food safety and microbiological risk assessment, Prof. Chai chaired the Young Scientists Network-Academy of Sciences Malaysia (2018–2023), where she led over 200 top young scientists. She developed Malaysia' s first Educational Module on Responsible Conduct of Research and was appointed co-chair of the ASEAN Young Scientists Network in 2024.

Prof. Chai' s exemplary leadership in science and education has earned her prestigious accolades, including the L' Oréal-UNESCO Women in Science Award. A passionate advocate for research ethics and excellence, she continues to champion transformative education and inspire the next generation of scientists in Malaysia and Southeast Asia.

Yong-Guan ZHU

Director General, Research Center for Eco-environmental Sciences, Chinese Academy of Sciences

Professor Yongguan (Yong-Guan) Zhu, Academician of the Chinese Academy of Sciences (CAS), Fellow of TWAS (The World Academy of Sciences), Fellow of International Science Council (ISC), professor of environmental science and health, is the Director General of the Research Center for Eco-environmental Sciences, CAS. He has been working on environmental health and wellbeing related to pollution, soil biodiversity and microbial ecology. He obtained his PhD from Imperial College, London in 1998. He was a scientific committee member for ISC program on Human Health and Wellbeing in Changing Urban Environment, and is a member of the Committee of Science Planning of ISC. He served for nine years as a member of Standing Advisory Group for Nuclear Application, International Atomic Energy Agency (2004-2012). He has received many merit awards, including TWAS Award for Agricultural Science 2013, National Natural Science Award 2009 & 2023, International Union of Soil Science von Liebig Award 2022. He publishes widely in international journals with an H-index of 126 (Web of Science), and has been selected as a Web of Science Highly Cited Researcher (2016-2024).

Udom SAE-UENG

Senior Researcher at National Science and Technology Development Agency (NSTDA), Thailand

Co-chair of the Thai Young Scientists Academy (TYSA)

Member of the Global Young Academy (GYA)

Dr. Udom was born in the south of Thailand. He won a Royal Thai Government Scholarship to study in the US. He completed his B.A. in Physics at Cornell University, USA, in 2009. During his M.S. and Ph.D. in Physics at Carnegie Mellon University, USA, he focused on the biological physics of viruses and viral infection, leading to the discovery of DNA transition inside viruses for the first time in the world. In 2015, he became a researcher at NSTDA, Thailand. He applied biophysical techniques to investigate biological systems and materials. Since Thailand is a major food producer worldwide, he also focused on studying phages for the biological control of bacterial pathogens in crops and aquaculture. In addition to the research work, he is enthusiastic about science communication. In 2019, he won first prize in Falling Walls Lab Thailand and competed at the international Falling Walls Lab in Berlin. In 2020, he was awarded a Leaders in Innovation Fellowship (LIF) from the Royal Academy of Engineering, United Kingdom.

He is currently a member of the Global Young Academy, a co-chair of the Thai Young Scientists Academy, and a committee member of the Microscopy Society of Thailand.

Minhua SHAO

Cheong Ying Chan Professor of Energy Engineering and Environment,
The Hong Kong University of Science and Technology

Minhua Shao is the Cheong Ying Chan Professor of Energy Engineering and Environment, Head and Chair Professor in the Department of Chemical and Biological Engineering at the Hong Kong University of Science and Technology (HKUST). He is also the Director of the HKUST Energy Institute. He earned BS and MS degrees in Chemistry from Xiamen University, and a PhD degree in Materials Science and Engineering from the State University of New York at Stony Brook. Dr. Shao joined UTC Power in 2007 leading the development of advanced electrocatalyts for fuel cells, and was promoted to UTC Technical Fellow in 2012. In 2013, he joined Ford Motor Company to conduct research on lithium-ion batteries. He then joined HKUST in 2014. He is the Technical Editor of Journal of the Electrochemical Society. He has published over 300 peer-reviewed articles, 1 edited book and filed over 30 patent applications. He has also received a number of awards, including the International Outstanding Young Chemical Engineer Award (2022), Supramaniam Srinivasan Young Investigator Award from the ECS Energy Technology Division (2014). He is one of the founding members of The Hong Kong Young Academy of Sciences and Fellow of the Electrochemical Society.

Zhifeng HUANG

Associate Professor in Department of Chemistry, The Chinese University of Hong Kong

Member of The Hong Kong Young Academy of Sciences (YASHK)

Vice President, Hong Kong Materials Research Society (HKMRS)

Prof. Zhifeng HUANG, Associate Professor at The Chinese University of Hong Kong, is Member of The Hong Kong Young Academy of Sciences, and Vice President of HK Materials Research Society. Prof. Huang is devoted to fabricating inorganic nanopillar arrays to study chiral nanoplasmonics, surface-enhanced chiroptical spectroscopies, asymmetric (photo)catalysis, optoelectronics and cell culture. He contributed two book chapters, and published his studies in high-impact journals, such as Nat. Chem., Nat. Nanotechnol., Nat. Commun., Adv. Mater., Adv. Funct. Mater., JACS, and Angew. Chem. Int.-Ed. Prof. Huang co-founded a spin-off, Mat-A-Cell Ltd., to commercialize a new-generation medical nano-device for cell culture. The invention, patented in US and China, was awarded 2019 TechConnect Innovation Award and Gold Medal with Congratulations of Jury (the 46th International Exhibition of Inventions of Geneva, 2018).

Chung Po WONG

Associate Director (Programme), The Hong Kong Academy for Gifted Education

Mr Wong Chung-po is a dedicated educator with over 30 years of experience in shaping education in Hong Kong. He started his career as a secondary school biology teacher before transitioning to the Education Bureau, serving as Senior Curriculum Officer. In this role, Mr Wong conducted teacher professional development programmes and advised both primary and secondary schools on the design and implementation of school-based gifted education programmes.

After 15 years of teacher training, he became the Associate Director of the Hong Kong Academy for Gifted Education, overseeing curriculum and programme development for gifted students aged 10-18. Under his leadership, the Academy has provided impactful learning opportunities to nurture the potential of gifted students across the territory.

With a deep passion for fostering educational excellence, Mr Wong has been instrumental in empowering teachers and enriching the learning experiences of gifted students. He remains committed to driving educational innovation and inspiring the next generation of thinkers and leaders.

Chandra Shekhar SHARMA

Co-Chair, Global Young Academy

Professor, Department of Chemical Engineering, Indian Institute of Technology (IIT), Hyderabad

Former Dean (Sponsored Research & Consultancy), IIT Hyderabad

Former Chair, Indian National Young Academy of Sciences (INYAS)

Swarna Jayanti Fellow, Department of Science & Technology, Govt. of India

Chandra Shekhar Sharma is currently a Professor in Department of Chemical Engineering at Indian Institute of Technology (IIT), Hyderabad and also a Co-Chair of Global Young Academy. Earlier, he also served as Dean of Sponsored Research & Consultancy at IIT Hyderabad for two years from 2022-2024. His research group named as CARBON Lab at IIT Hyderabad focuses on next generation energy storage devices including Li-ion, Metal-S batteries and supercapacitors; electrospun nanofibers for energy, environment, healthcare and sensor applications.

Prof. Sharma has more than 155 international peer-reviewed journal publications and 18 national and international patents to his credit. Prof. SHARMA has received several awards and recognitions at National & International level including the prestigious Department of Science & Technology (DST) Swarna Jayanti Fellowship in Engineering Sciences in 2020. He has also been featured recently in a compendium prepared by DST as 75 Young Scientists under 50 years shaping Today' s India for his scientific contribution. Prof. SHARMA has also served as the Chairperson of Indian National Young Academy of Sciences (INYAS) for two years from 2020 to 2022. As Chair of INYAS, Prof. SHARMA had been instrumental in taking several new initiatives for capacity building and gender inclusiveness in STEM.

Che Ting CHAN

Daniel C K Yu Professor of Science, The Hong Kong University of Science and Technology

Prof Che Ting Chan received his BSc degree from the University of Hong Kong in 1980 and his PhD degree from the University of California at Berkeley in 1985. He is the Daniel C K Yu Professor of Science, Chair Professor of Physics, and the Director of Research Office of HKUST. He was elected a Fellow of the American Physical Society (1996) and Physical Society of Hong Kong (2018). He was elected to be a member of the Hong Kong Academy of Sciences in 2021.

Stephanie MA

Founding Member and Vice-President, The Hong Kong Young Academy of Sciences

Jimmy and Emily Tang Professor in Molecular Genetics, School of Biomedical Sciences, HKUMed

Associate Vice-President (Research and Innovation), The University of Hong Kong

Prof Stephanie Ma is currently the Jimmy and Emily Tang Professor in Molecular Genetics at the School of Biomedical Sciences in The University of Hong Kong Li Ka Shing Faculty of Medicine (HKUMed), and the Associate Vice-President (Research and Innovation) at HKU. Previously, she served as an Associate Director in the School of Biomedical Sciences and the Assistant Dean (Innovation and Technology Transfer) at HKUMed and was the Associate Director of the Knowledge Exchange Office at HKU. She holds a B.Sc. and M.Sc. degree from the University of British Columbia and a Ph.D. degree from the University of Hong Kong. Prof Ma has over 20 years of experience in scientific research and teaching in academia, with interest in cancer cell plasticity, and has been recognized by numerous awards including the 2008 Young Scientist Award in Life Sciences from the Hong Kong Institution of Science, the 2014 Croucher Innovation Award, the 2014 Scientific Research Outstanding Achievement Awards (Second-class Award in Science and Technology Section) from the Higher Education Institution of China, the 2017 University of British Columbia Alumni Builder Award (Canada), the 2021 Research Grants Council (RGC) Research Fellow Scheme as well as the 2023 Croucher Senior Research Fellowship. In her field, she has been listed by Clarivate as a top 1% most-cited scholar (2010–2018) and by Stanford University as a top 2% scientist worldwide (2022-2024).

Prof Ma is also a Founding Member of the Hong Kong Young Academy of Sciences, where she currently serves as Vice-President and Co-Chair of their Outreach Committee. She is also a Principal Investigator in the State Key Laboratory of Liver Research. Prof Ma is active in community services and currently serves as a board member at Hong Kong Science and Technology Parks (HKSTP), and as a member of the Science Sub-committee under the Museum Advisory Committee.

Denvid LAU

Founding Member and Co-chair, Outreach Committee, The Hong Kong Young Academy of Sciences
Professor, Department of Architecture and Civil Engineering, City University of Hong Kong
Associate Director, CityU Academy of Innovation

Denvid obtained his Bachelor degree with first class honors and Master degree in Civil Engineering from the University of Hong Kong (HKU), and got his second Master degree from the Department of Civil and Environmental Engineering (CEE) at Massachusetts Institute of Technology (MIT). He then received his Ph.D. in the field of structures and materials from MIT in 2012. Prior to joining City University of Hong Kong (CityU) as an assistant professor in August 2012, he worked as a postdoctoral associate at MIT. He is currently a full professor at CityU. From January to July 2020, he was a visiting professor at MIT CEE. His research focuses on the functionalized construction materials, multiscale modeling of organic-inorganic system, moisture-induced debonding, durability and fiber reinforced polymer (FRP) composites in structural rehabilitation. To date, Denvid has attracted over HK$17 million fund in total for research and teaching development. He is currently the editorial board member of several international journals. He has published more than 170 referred journal and conference articles and has delivered more than 40 invited talks, which include plenary and keynote speeches in international conferences. Since 2018, Denvid has been nominated and selected as a Founding Member of the Hong Kong Young Academy of Sciences (YASHK). He has received one of The President' s Awards from CityU, in recognition of his remarkable academic achievement. Denvid has been granted the 2020 Outstanding Supervisor Award from CityU in view of his excellent research supervision towards Ph.D. students. Recently, Denvid has been awarded the 2022 Outstanding Teaching Award from the College of Engineering.

05

ACKNOWLEDGEMENTS

ORGANISER

THE HONG KONG YOUNG ACADEMY OF SCIENCES
香 港 青 年 科 學 院

CO-ORGANISERS

大灣區共同家園投資有限公司
Greater Bay Area Homeland Investments Limited

大灣區共同家園青年公益基金
Greater Bay Area Homeland Youth Community Foundation

LOCAL ACADEMIC PARTNERS

香港城市大學 City University of Hong Kong

香港都會大學 科技學院 Hong Kong Metropolitan University School of Science and Technology

PEAK
Member of VTC Group

Lingnan 嶺南大學 University 香港 Hong Kong

香港中文大學 The Chinese University of Hong Kong

THE HONG KONG POLYTECHNIC UNIVERSITY 香港理工大學

香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY

The University of Hong Kong Technology Transfer Office 香港大學技術轉移處

SUPPORTING ORGANISATIONS

ASTRI Hong Kong Applied Science and Technology Research Institute 香港應用科技研究院

數碼港 Cyberport 20

香港科技園 HKSTP

香港青年工業家協會 HONG KONG YOUNG INDUSTRIALISTS COUNCIL

FUNDING ORGANISATION

創新科技署 Innovation and Technology Commission

政府資助計劃 Government-funded Programme

Any opinions, findings, conclusion or recommendations expressed in this material/event (or by members of the project team) do not reflect the views of the Government of the Hong Kong Special Administrative Region, the Innovation and Technology Commission or the Vetting Committee of the General Support Programme of the Innovation and Technology Fund.

(Listed in alphabetical order)

YOUNG ACADEMY
OF SCIENCES SUMMIT
青年科學家峰會

CONTACT US

THE HONG KONG YOUNG
ACADEMY OF SCIENCES
香 港 青 年 科 學 院

The Hong Kong Young Academy of Sciences

(852) 3907 0659
yass@ashk.org.hk
Unit 702, 7/F, Building 10W, No. 10 Science Park West Avenue,
Hong Kong Science Park, Shatin, Hong Kong

The Hong Kong Young Academy of Sciences 香港青年科學院
The Hong Kong Young Academy of Sciences 香港青年科學院
yashk_hk