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NAVIGATING INNOVATION FOR TOMORROW

科研領航 智創未來

TECH
FOR
EVERYONE●

Ir Sunny Lee
李惠光工程師
BBS, JP

Board Chairman of Hong Kong Applied Science
and Technology Research Institute
香港應用科技研究院董事局主席



“As we celebrate ASTRI's 25th anniversary, I am honoured to reflect on its remarkable journey and pivotal role in Hong Kong's innovation ecosystem.

值此慶祝應科院25週年之際，本人深感榮幸能回顧其非凡發展歷程，以及在香港創科生態圈扮演的關鍵角色。

Since its establishment in 2000, ASTRI has been at the forefront of applied science and technology research, consistently driving Hong Kong's competitiveness in the global arena.

We are deeply grateful to our former chairmen, Board members, CEOs and the entire ASTRI team for their dedicated efforts in building a solid foundation and paving the way for ASTRI's continued success.

ASTRI's commitment to excellence is evident in its impressive track record. The institute had successfully transferred over 1,500 technologies to industry partners and had secured more than 1,100 patents across mainland China, the United States, and beyond. These figures not only attest to our research capabilities but also form a golden triangle connecting government, academia and industry, successfully translating laboratory findings into tangible contributions that drive societal progress.

Among many breakthroughs, ASTRI has strategically focused on strengthening the entire research ecosystem in recent years. The establishment of four technology consortia, covering areas such as microelectronics, smart mobility, FinTech, and construction and property technology, exemplifies ASTRI's dedication to building robust industry partnerships and cementing Hong Kong as an international innovation and technology hub.

This “Government-industry-academia-research-investment” collaboration has been instrumental in addressing industry pain points and accelerating innovation. From government-funded platform projects to contract research and development, these models ensure that cutting-edge technologies are effectively developed and transferred to meet diverse industry needs.

Looking ahead, ASTRI will continue to drive Hong Kong's development in smart city, financial technologies, application-specific integrated circuits, digital health, new industrialisation and intelligent manufacturing, and metaverse through technological advancements.

I am confident that the synergy resulting from the merger between ASTRI and the Nano and Advanced Materials Institute will drive enhanced R&D outcomes, contributing to Hong Kong's innovation and technology development as an even stronger research institute and advancement of our country's new quality productive forces.

自千禧年創立以來，應科院一直傲立創新科技研發前沿，藉科技增強香港在國際舞台上的競爭力。

我們衷心感謝歷任主席、董事會成員、行政總裁及全體員工的貢獻，奠下穩固根基，為應科院的持續發展鋪平道路。

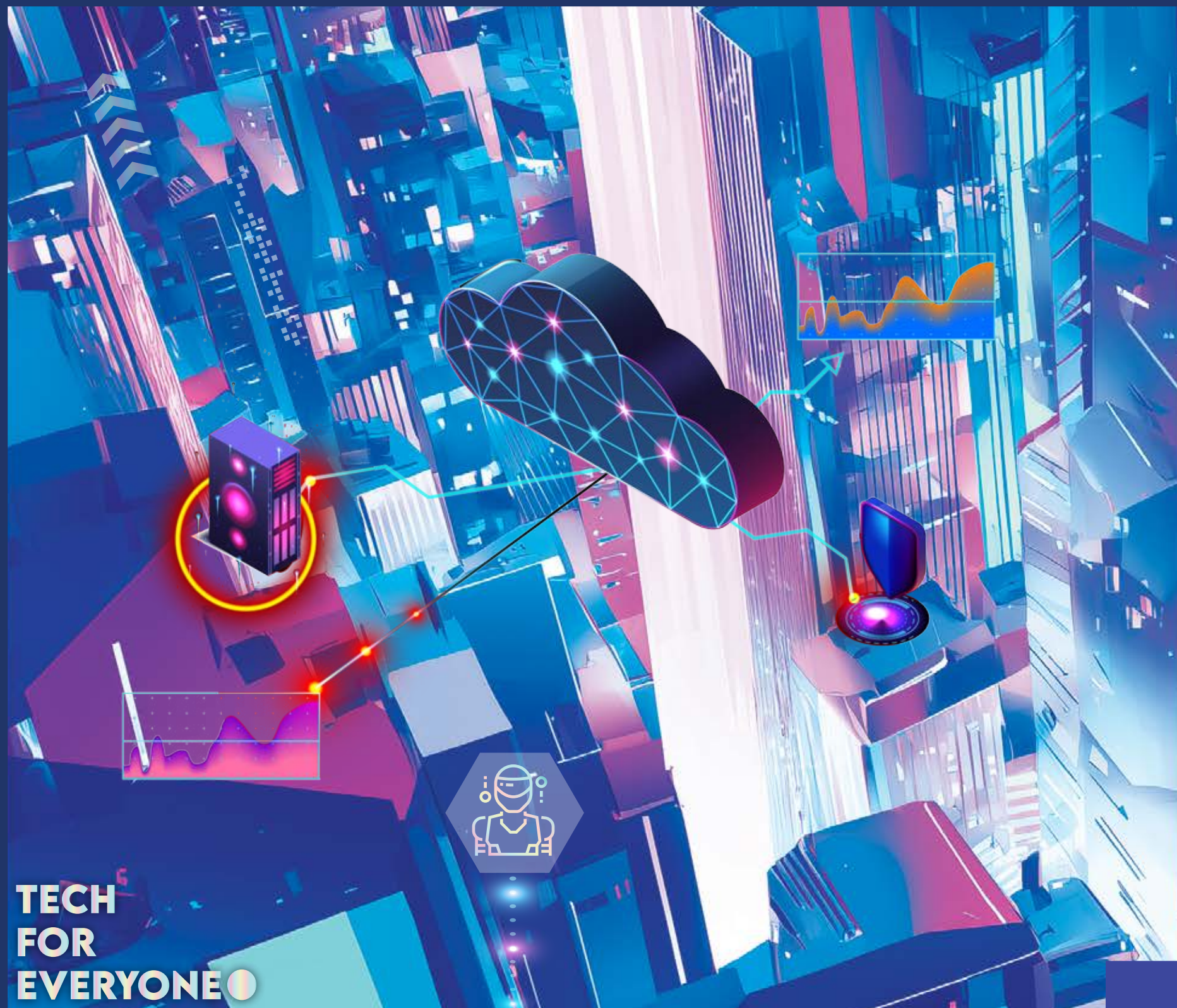
應科院的卓越成就可謂擲地有聲，迄今，已成功向業界夥伴轉移超過1,500項技術，並在中國內地、美國及其他地區取得逾1,100項專利。這些數字不僅印證了我們的科研實力，更構築起貫通政府、學術界和產業界的黃金三角，成功將實驗室成果轉化為推動社會進步的實質貢獻。

近年應科院不斷突破，以戰略眼光推動創科生態圈升級，創立四大技術聯盟涵蓋微電子、智慧出行、金融、建築及物管等科技，全方位促進跨界協作，鞏固香港作為國際創新科技中心地位。

這種「政產學研投」的合作模式，既破解產業轉型痛點，亦為技術轉移落地應用鋪設高速通道。從政府資助的共享科研平台，到量身定制的合約研發服務，靈活機制確保尖端技術能精準對接市場需求。

展望未來，應科院將繼續透過創新科技為香港在智慧城市、金融科技、新型工業化及智能製造方面的發展注入新動能，同時為數碼健康科技、專用集成電路及元宇宙的升級提供有力的技術支撐。

我深信應科院與納米及先進材料研發院合併將帶來協同作用，成為更具實力的科研機構，讓研發成果更上一層樓，為香港創科及國家新質生產力的發展作出貢獻。



TECH
FOR
EVERYONE●

BOUNDLESS FUTURE
未來創科 無限可能



Ir Dr Ted Suen 孫耀達博士工程師 MH

Chief Executive Officer of Hong Kong Applied
Science and Technology Research Institute
香港應用科技研究院行政總裁



“With **ASTRI** marking its **25th** anniversary, I am deeply honoured to join this remarkable institution at such a pivotal milestone.

應科院喜迎25周年之際，我深感榮幸能於此關鍵時刻加入這所卓越機構。

This silver jubilee stands as testament to ASTRI's unwavering commitment to innovation and its instrumental role in advancing Hong Kong's technological leadership.

Building upon a quarter-century of excellence, and supported by our exceptionally talented team, I am confident we will propel ASTRI to unprecedented heights. Together, we shall continue pioneering transformative technologies across industries to strengthen our role in innovation, collaboration, and global impact.

Our commitment centres on three interconnected priorities. We champion IP commercialisation, transforming cutting-edge research into tangible, marketable solutions through our technology ecosystems alongside strategic university partnerships.

We enhance our super-connector role by attracting overseas technologies to stimulate local innovation whilst facilitating global expansion of Mainland China and homegrown technologies, creating a vital two-way bridge for technological advancement and opportunities.

Understanding that exceptional talent drives meaningful innovation, we cultivate an engaging environment that attracts top global talent. Through nurturing homegrown expertise and inspiring emerging talent, we foster an interactive ecosystem where bold ideas flourish, driving sustainable growth across Hong Kong, the Greater Bay Area, and beyond.

Guided by our mission to enhance Hong Kong's competitiveness through applied research, we embark on this exciting new chapter with renewed ambition and unwavering dedication. Our focus on innovation ensures our breakthroughs continue serving the greater good, enhancing quality of life, and addressing pressing global challenges.

I look forward with great anticipation to leading ASTRI into its next era of transformative excellence, creating boundless possibilities through innovation and technology.

銀禧紀念見證了應科院對創新的堅定承諾，以及在鞏固香港科技領導地位所發揮的重要作用。

憑藉四分一世紀以來的卓越成就及優秀團隊的支持，本人深信我們將引領應科院邁向新高。未來我們將攜手開拓能廣泛應用在不同行業的變革性技術，強化本院的創新協同與全球影響力。

我們聚焦三大相互協作的戰略方向。應科院致力推動科研成果轉化，透過科研生態系統及與各大學的策略合作，將嶄新研究轉化為具市場效益的解決方案，促進知識產權商品化。

應科院也積極引進海外科技激發本地創新，同時促進內地和本土科技走向全球，深化我們的「超級聯繫人」角色，構建國際科技雙向合作橋樑。

我們深明卓越人才有助推動創新，因此致力營造吸引全球頂尖創科人才的優質環境，並培育本地專才和啟發新世代，創建讓創意思維蓬勃發展的互動生態系統，驅動香港、大灣區乃至其他地區的持續增長。

在「透過應用科技研究提升香港競爭力」的使命指引下，我們懷抱更熾熱的雄心與堅定承諾，開啟創科新篇章。我們對創新科技的堅持，將確保科研成果持續惠澤社會整體、提升生活質素，並積極應對迫切的全球挑戰。

本人熱切期盼帶領應科院邁向下個卓越里程，透過創科釋放無限潛能，共創科技新紀元。



**WARM WISHES LIGHT
OUR HEARTS**

摯誠祝賀 感恩滿載

**TECH
FOR
EVERYONE●**



The Hon John KC Lee
李家超先生
GBM, SBS, PDSM, PMSM

Chief Executive of the Hong Kong
Special Administrative Region
香港特別行政區行政長官

**I am pleased to congratulate the Hong Kong Applied
Science and Technology Research Institute (ASTRI)
on its landmark 25th anniversary.**

**香港應用科技研究院(應科院)踏入25周年的新里
程,可喜可賀。**

The largest government-funded research institute in Hong Kong, ASTRI was established in 2000, with a mission to boost Hong Kong's global competitiveness through applied research. In early 2024, its wholly owned subsidiary, the ASTRI Science and Technology Research (Shenzhen) Company Limited, relocated to the Hetao Co-operation Zone. It has continued to strive hard to deliver results, helping to drive Hong Kong's transformation into an international hub for applied research and technological advancement. With some 750 employees, about 80 per cent of whom are involved in research and development, ASTRI has transferred more than 1,500 technologies to industry and been granted over 1,100 patents in Mainland China and around the world. This has generated economic value of over HK\$450 million. ASTRI's wide-ranging research focuses on six core areas: the smart city, financial technologies, new industrialisation and intelligence manufacturing, digital health, application-specific integrated circuits and the metaverse. In driving innovation and technology, ASTRI is helping Hong Kong better integrate into the development of the country and its national strategies.

Collaboration is at the heart of ASTRI's mandate. In the past two years, ASTRI has brought together government, industry, academia and research in four smart groupings: the Microelectronics Technology Consortium, the Smart Mobility Technology (C-V2X) Alliance, the FinTech & ESG Alliance and the ConTech & PropTech Alliance. It has also partnered with six local universities, launched nearly 40 University Technology Transfer projects and is expanding its outreach efforts. These include an agreement with Thailand's National Science and Technology Development Agency, talent exchanges with universities in Singapore and early-stage collaborations in Finland and Sweden.

I am confident that ASTRI will continue to push the boundaries of applied science and technology, commercialising research, creating new market opportunities and bolstering Hong Kong's fast-rising status as a global innovation powerhouse.

My congratulations, once again, to ASTRI and each and every one of you in the team on the occasion of your milestone silver jubilee.

應科院在2000年成立,為香港最大的政府資助研究機構,旨在通過應用研究提升香港的環球競爭力。2024年年初,該院全資附屬公司應科院科技研究(深圳)有限公司遷往河套合作區,促進科研發展。應科院上下憑藉積極進取的精神,不斷取得實際成果,協助把香港打造為國際應用研究及科技發展樞紐。該院共有750多名員工,當中約八成從事研發工作,至今已把逾1,500項技術轉移至業界,更在中國內地以至全球獲授1,100多項專利,所創造的經濟價值逾四億五千萬港元。應科院主要圍繞六大範疇進行廣泛研究,分別是智慧城市、金融科技、新型工業化及智能製造、數碼健康科技、專用集成電路及元宇宙。應科院通過推動創新科技發展,助力香港更好地融入國家發展大局、配合國家策略。

應科院向來以協作為重。該院過去兩年間已成立「微電子技術聯盟」、「智慧出行車聯網技術聯盟」、「金融科技與永續發展聯盟」和「建築及房地產科技聯盟」四個智慧組合,促成「官產學研」合作;並與六所本地大學結為伙伴,協力開展近40個技術轉移項目。該院正不斷開拓合作機會,包括與泰國國家科學技術發展署簽訂協議,與新加坡不同大學舉辦人才交流活動,以及與芬蘭和瑞典進行早期協作。

我深信應科院會繼續開拓應用科技新領域,推動研究成果商品化,創造新市場機遇,以及鞏固香港作為全球科研合作中心的地位。

再次祝賀應科院全體人員喜迎新禧,卓展新章。



The Hon Paul Chan Mo-po
陳茂波先生
GBM, GBS, MH, JP

Financial Secretary of the Government of the
Hong Kong Special Administrative Region
香港特別行政區政府財政司司長

“ I would like to extend my sincere congratulations
to the Hong Kong Applied Science and Technology
Research Institute (ASTRI) on its 25th anniversary.

欣逢香港應用科技研究院(應科院)成立25周年，
謹此衷心致賀。



Since its inception in 2000, ASTRI has been committed to making Hong Kong more competitive through applied research. Working in partnership with academic institutions, public sector organisations and the industry, ASTRI has produced a great many different innovative technologies, providing solutions for businesses of all sizes in diverse sectors. Its sterling contributions to technological advancement have helped build a vibrant innovation and technology (I&T) ecosystem in Hong Kong.

Over the years, ASTRI has grown into a renowned applied research institute, winning numerous awards for its state-of-the-art innovations both at home and abroad, thanks to the efforts of its rich pool of top-notch researchers and I&T experts. The fast-growing number of patents filed and successful cases of technology transfer are also testimony to its remarkable capability and distinguished achievements.

Looking ahead, I have every confidence that ASTRI will build on its solid foundation as it looks to seek breakthroughs and scale new heights, driving Hong Kong to become a leading international I&T hub. On this momentous occasion of its silver jubilee, may I wish ASTRI continued success in its future endeavours.

應科院自2000年成立以來，致力透過應用研究提升香港的競爭力。應科院與學術機構、公營機構和業界合作無間，研發大量具商業價值的創新技術，為大小行業提供解決方案。在推動科技發展的同時，也為香港構建蓬勃的創科生態圈，貢獻良多。

應科院精英雲集、專才輩出，時至今日，已發展成為世界知名的應用研究機構，研發出眾多尖端創新技術，在本地和海外屢獲殊榮。應科院提出的專利申請和技術轉移成功個案節節攀升，成績驕人，也足證其實力雄厚非凡。

展望未來，我深信應科院定會固本開新，尋求突破，致力把香港打造成為一流的國際創科樞紐。際此銀禧之慶，我衷心祝願應科院在往後的日子鴻猷續展，再創輝煌。



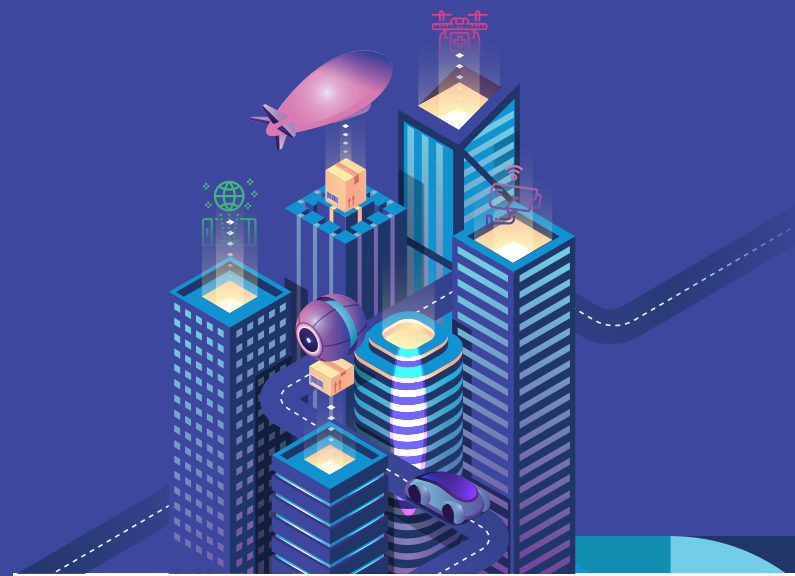


Mr Michael Wong
黃偉綸先生
GBS, JP

Deputy Financial Secretary of the Government
of the Hong Kong Special Administrative Region
香港特別行政區政府財政司副司長

It gives me great pleasure to extend my heartfelt congratulations to the Hong Kong Applied Science and Technology Research Institute (ASTRI) on the momentous occasion of its 25th anniversary.

喜逢香港應用科技研究院(應科院)銀禧誌慶，謹致衷心祝賀。



Reaching this important milestone is an achievement, and a true reflection of its enduring commitment to innovation, excellence in research, and progress in technology.

Over the past quarter century, ASTRI has made significant contributions to the Hong Kong economy, positioning the city as a leading technology hub in Asia. Its pioneering research and development efforts have advanced various industries and benefited business and communities alike.

ASTRI invests in R&D across several technology sectors, contributing to the advancement of knowledge and technology in Hong Kong. By promoting technology adoption and innovation, ASTRI supports the diversification of Hong Kong's economy beyond traditional sectors, helping the city enhance its resilience against economic fluctuations.

As we congratulate ASTRI on its silver jubilee, it is important to recognise the positive impact ASTRI has had on our community and the broader economy. Its dedication to sustainability, smart city development, and international collaboration has set a solid foundation for future growth and innovation.

Looking ahead, I am confident that ASTRI will continue to lead with passion and purpose, supporting the development of our economy. Its commitment to nurturing talent and fostering a culture of creativity will undoubtedly pave the way for even greater accomplishments in the years to come.

Once again, congratulations on this significant anniversary, and I look forward to seeing ASTRI continues to lead the way in technological advancement and contributes to the prosperity of Hong Kong.

應科院能夠昂然展步，走向25周年這個重要里程碑，正好體現其對砥礪創新、追求卓越研發成果和推動科技進步的堅定承諾。

在過去四分一個世紀，應科院致力研發創新科技，促進各行各業發展，惠及企業和社羣，讓香港成為亞洲領先的科技樞紐，對香港經濟貢獻良多。

應科院在多個技術領域着力研發，提升香港的知識和技術水平。應科院藉推動技術應用和創新，支持香港經濟多元發展，突破傳統行業的規範，增強香港應對經濟波動的韌性。

在祝賀應科院銀禧誌慶之際，還得表揚其對社區和整體經濟所起的正面作用。應科院銳意推動可持續發展、構建智慧城市和促進國際合作，為未來的發展和創新奠定了穩固的基礎。

展望未來，我深信應科院會貫徹對創研發的熱誠，朝着清晰的目標進發，引領業界邁步向前，促進經濟發展。此外，應科院一直致力培育人才和提倡創意文化，日後的研發工作定可更上層樓，取得更輝煌成就。

我謹此再次恭賀應科院，並期望應科院在推動科技發展方面繼續發揮領導作用，為香港的繁榮作出貢獻。



Professor Dong Sun
孫東教授
JP

Secretary for Innovation, Technology and Industry,
HKSAR Government
香港特區政府創新科技及工業局局長

I am delighted to extend my warm congratulations to the Hong Kong Applied Science and Technology Research Institute (ASTRI) on its remarkable 25th anniversary.

我謹此熱烈祝賀香港應用科技研究院(應科院)成立25周年。



Over the past quarter of a century, ASTRI has been a driving force behind Hong Kong's development into a global hub for applied research and cutting-edge technology, enhancing Hong Kong's competitiveness in global technology landscape. Through groundbreaking research, close industry collaboration, and unwavering commitment to nurturing talent, ASTRI has propelled advancements in fields such as advanced electronics, AI, communications, IoT sensing, and more, bringing tangible benefits to our economy and society.

Hong Kong's future as an innovation-driven city is brighter than ever. I am confident that ASTRI will continue to play a pivotal role in supporting Hong Kong's grand vision of becoming an international innovation and technology (I&T) centre. On this remarkable occasion, I would like to express my sincere gratitude to each and every member of ASTRI for your unwavering commitment and dedication. Your hard work and foresight have not only strengthened Hong Kong's technological capabilities but also inspired a new generation of innovators and entrepreneurs. I am confident that ASTRI's legacy of innovation and excellence will endure, inspiring future generations and driving Hong Kong's I&T development for decades to come.

Congratulations once again to ASTRI on its silver jubilee. May ASTRI continue to thrive, innovate, and lead the way in shaping a brighter future for Hong Kong's development.

在過去的四分之一世紀中，應科院一直積極推動香港發展成為全球應用研究和尖端科技的樞紐，提升香港在國際科技領域的競爭力。透過突破性的研究、緊密的產業合作，以及對培育人才的不懈努力，應科院推動了包括先進電子、人工智能、通訊科技及物聯網感測等多個科技領域的發展，為香港的經濟和社會帶來實質效益。

香港作為一個以創新為動力的城市，前景比以往任何時候都更加光明。我深信應科院將繼續在支持香港成為國際創新科技中心的宏大願景中扮演關鍵角色。值此重要時刻，我衷心感謝應科院的每一位成員的不懈努力和奉獻。你們的工作和遠見不但加強了香港的創科實力，也激勵了新一代的創新者和企業家。我深信應科院的創新與卓越傳統將薪火相傳，並繼續推動香港未來的創科發展。

再次祝賀應科院的銀禧誌慶，並祝願應科院繼續茁壯成長，創新不息，引領香港的創科發展邁向更加光明的未來。

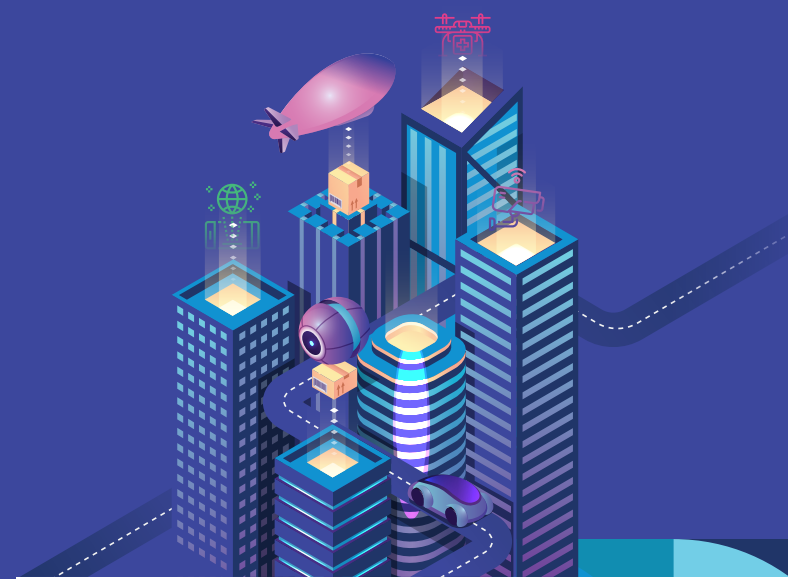


Mr Ivan Lee
李國彬先生
JP

Commissioner for Innovation and Technology,
HKSAR Government
香港特區政府創新科技署署長

“ On behalf of the Innovation and Technology Commission, I am delighted to congratulate Hong Kong Applied Science and Technology Research Institute (ASTRI) on its 25th anniversary.

本人謹代表創新科技署，向香港應用科技研究院（應科院）致以衷心祝賀，慶祝成立25周年。



Since the establishment, ASTRI has made great strides in research and development of innovation and technology. It served as one of the major platforms to support the HKSAR Government's vision to transform Hong Kong as a competitive, innovative and technology-oriented smart city. Through application and commercialisation, many ASTRI's technologies have been transferred to private companies, public organisations and government departments, bringing positive impact to the society.

ASTRI is committed to developing a holistic innovation ecosystem, enlarge the innovation and technology talent pool, and closely collaborate with local universities, industries and professional bodies. In early 2024, ASTRI has further expanded to Shenzhen so as to enhance collaboration with the Greater Bay Area.

I extend my heartfelt gratitude to the dedicated staff who relentlessly pursuit excellence and innovation, and earn accolades and recognition of the industries.

I wish ASTRI could continue to progress, innovate and transform more innovations in the years to come.

應科院自成立以來，在研發方面成就卓越，是香港特區政府把香港發展成為具競爭力、創新和聚焦科技的智慧城市的一個重要平台。通過科研成果落地及商業化，多項應科院的技術已成功轉移至私營企業、公共機構和政府部門，為整個社會帶來正面影響。

應科院致力發展生態系統和創建可持續人才庫，並與本地大學、工業界和專業機構建立緊密聯繫。應科院更於2024年初在深圳擴充營運，增強與大灣區的合作。

我衷心感謝應科院上下一心，對卓越和創新的追求，為其贏得獎項和業界的認同。

我祝願應科院未來繼續進步、研發及轉化更多創新科技。



Dr Sunny Chai
查毅超博士
SBS, BBS, JP

Chairman, Hong Kong Science and
Technology Parks Corporation
香港科技園公司主席

Professor Cheng Shuk-han
鄭淑嫻教授
MH

Chairwoman,
Nano and Advanced Materials Institute
納米及先進材料研發院主席



Heartiest congratulations to the Hong Kong Applied Science and Technology Research Institute (ASTRI) on its Silver Jubilee. This milestone marks a quarter-century of profound contributions to technological innovation and highlights ASTRI's significant impact on our society and economy in Hong Kong and globally.

Nestled within the vibrant ecosystem of our Science Park, ASTRI stands as a beacon of innovation, seamlessly translating theoretical research into practical applications. Leveraging ICT expertise, advanced sensors, and state-of-the-art network and security technologies, ASTRI considerably improves city operations and information flow. For core areas including Smart City initiatives, FinTech, and Digital Health, we witness its development in boosting the standard of living for communities, contributing to receiving numerous overseas awards for pioneering innovations and outstanding contributions to business and community.

ASTRI is a forerunner in applied research innovation, boasting a dynamic team of expert researchers and industry professionals. The institute's dedication to talent development is evident in its efforts to create diverse collaboration opportunities. Many of these individuals have achieved notable international acclaim for their contributions. And its robust intellectual property strategy underpins the market-ready innovations, ensuring they deliver economic advantages and competitive benefits to the industries they serve.

As innovation perpetually shapes a sustainable, technologically advanced future, ASTRI's ongoing projects are well-positioned to keep Hong Kong's infrastructure, healthcare, and digital services at the forefront of global technological developments.

I wish ASTRI enduring success and hope that the future will be as fruitful and inspiring as the last, driving local and worldwide breakthroughs while building ever more solidly on the strong foundation of its past achievements.

我謹代表香港科技園公司(科技園公司)，衷心祝賀香港應用科技研究院(應科院)銀禧年之慶。這一里程碑標誌着應科院在過去四分之一個世紀對科技創新的貢獻，並凸顯了其對香港及全球社會和經濟的重要影響。

應科院坐落於科學園充滿活力的創科生態圈中，以創新為帆，揚起理論研究到實際應用的無縫轉化之舟。應科院充分利用資訊及通訊科技專業知識、高端的傳感器，以及最先進的網絡和安全技術，顯著改善城市營運和信息流通。同時，其六項重點開拓範疇，包括智慧城市倡議、金融科技、數碼健康科技領域，切實提升了社區生活質素的發展，並憑藉開創技術獲得多個國際獎項，肯定了其技術創新和對工商業界及社區的傑出貢獻。

應科院以應用科技研究領航市場創新，率領一支由專業研究人員和行業翹楚組成的團隊破浪前行，團隊成員大多數憑藉卓越貢獻而獲得國際認可。多年來，應科院積極構建多元合作網絡，並提供培訓機會，培育創科人才發展。而其穩健的知識產權策略，能夠支持其市場創新，更持續為服務產業注入經濟動能與競爭先機。

隨着創新持續鑄就可持續的科技未來，應科院多項前瞻項目正以強勁動能，將香港的基礎設施、醫療體系與數字服務穩固於全球技術發展的前沿。

我祝願應科院繼續向前，持續推動本地和全球的突破，同時在過去成就的堅實基礎上不斷發展。

On behalf of the Nano and Advanced Materials Institute (NAMI), I wish to extend my heartfelt congratulations to the Hong Kong Applied Science and Technology Research Institute (ASTRI) on the occasion of its 25th anniversary, which marks a significant milestone in ASTRI's remarkable journey of shaping Hong Kong's innovation and technology landscape.

Over the past 25 years, ASTRI has emerged as a cornerstone of Hong Kong's research and development ecosystem, fostering groundbreaking advancements across industries. Its dedication to the commercialization of technological innovations has not only empowered local enterprises but has also contributed significantly to Hong Kong's global competitiveness in the field of innovation and technology.

NAMI deeply values our partnership with ASTRI, as we share a common vision of leveraging cutting-edge research to drive I&T development and meaningful societal progress in Hong Kong. Through collaboration, we have witnessed how ASTRI's unwavering pursuit of excellence has inspired new solutions, creating new opportunities for industries and uplifting the well-being of our community.

The theme of this commemorative booklet, "Tech for Everyone," perfectly captures the shared goal of making technological advancements accessible to all. It reflects ASTRI's unwavering dedication to inclusivity and sustainability, paving the way for a smarter, more equitable future.

As we honor ASTRI's extraordinary achievements, we are also excited about the future possibilities that lie ahead. The upcoming merger of ASTRI and NAMI represents a new opportunity to amplify the impact of both institutes. The combined strength of ASTRI and NAMI on innovative technologies and advanced materials will benefit the industry by spearheading new innovations; nurturing talent, and contributing to technological advancement and sustainable development of Hong Kong and beyond.

我謹代表納米及先進材料研發院(NAMI)，衷心祝賀香港應用科技研究院(ASTRI)成立25周年，這標誌着ASTRI在塑造香港創新科技的重要里程碑。

在過去25年，ASTRI作為香港研發生態系統的重要基石，推動各行業的突破性發展。ASTRI致力於技術創新及商品化，不僅賦能本地企業，還大大提升了香港在全球創新科技領域的競爭力。

NAMI非常重視與ASTRI的合作夥伴關係，我們有共同的願景，利用尖端研究推動香港創新科技發展及社會的進步。通過合作，我們見證了ASTRI對卓越的不懈追求，激發了全新的解決方案，為各行業創造了新機會，並造福社會。

本紀念特刊的主題——“Tech for Everyone”，反映了我們共同的目標，讓技術進步惠及所有人。這也展示了ASTRI對包容性和可持續性的堅定承諾，邁向更智能、更公平的未來。

在慶祝ASTRI卓越成就的同時，我們也對未來的機遇充滿期待。隨著NAMI和ASTRI即將合併，將會有全新機會，深化兩個研究院在科技上的影響。ASTRI和NAMI在創新技術和先進材料方面的綜合實力，有助繼續引領創新、培養人才，為香港及其他地區的科技進步和可持續發展作出貢獻。



Mr Simon Chan Sai-ming
陳細明先生
BBS, JP

Chairman of Hong Kong Cyberport
Management Company Limited
香港數碼港管理有限公司主席

I extend my warmest congratulations to Hong Kong Applied Science and Technology Research Institute (ASTRI) on its silver jubilee. Since its establishment in 2000, ASTRI has continuously enhanced applied technology research, striving to promote industrialisation of technology, and to revolutionise industries with technology, accelerating digital upgrade and transformation across sectors, thereby enhancing the competitive advantage of Hong Kong's industries. Over the past 25 years, ASTRI has achieved remarkable success, receiving widespread recognition for its pioneering technology innovations as well as outstanding contributions to business and society.

Over the years, ASTRI and Cyberport's close-knit partnership has promoted development of innovation and technology (I&T) in Hong Kong. Through multifaceted collaborations, we have bolstered entrepreneurs to unleash potential, and driven R&D, translation and application of I&T. To cultivate research and innovation talents, we have dedicated efforts to strengthening the youth's understanding of the I&T ecosystem, and thereby inspiring their career pursuits in I&T.

Going forward, we look forward to deepening our joint commitment to development of the digital economy and a smart city, making headway with our shared goal of developing Hong Kong into an international I&T hub.

欣逢香港應用科技研究院(應科院)銀禧誌慶,特此祝賀。應科院自2000年成立以來,不斷提升應用科技研究,致力推動科技產業化,並以科技革新不同產業,加速各行各業數字化升級轉型,提升香港產業的競爭優勢。25年來應科院成就卓越,憑著技術創新及對工商業界和社區的傑出貢獻,屢獲各界肯定。

多年來,應科院與數碼港亦一直合作無間,推動本地創科發展,通過不同方面合作,扶植初創企業發揮潛力,促進創新科技研發及落地轉化應用。在培育研究及創新人才方面,雙方合作加強青年對創科生態的認識,從而啓發其投身創科事業的志向。

展望未來,數碼港期待與應科院繼續深化合作,推動數字經濟發展與建設智慧香港,並肩邁向發展香港成為國際創新科技中心的共同目標。

The Hon Sunny Tan
陳祖恒先生

Chairman of Hong Kong Productivity Council
香港生產力促進局主席

On behalf of the Hong Kong Productivity Council (HKPC), I would like to extend my heartfelt congratulations as we celebrate the 25th Anniversary of Hong Kong Applied Science and Technology Research Institute (ASTRI).

Both HKPC and ASTRI have been advocating on the development of innovation and technology (I&T) in Hong Kong. Over the past quarter-century, we have witnessed ASTRI's commitment to empowering industries through technological excellence. As ASTRI celebrates its Silver Jubilee, I would like to convey my sincere wishes for this remarkable milestone.

Looking ahead to the next chapter, I wish ASTRI ever success in its future endeavours. Together, let us continue to foster Hong Kong's development as the International I&T Centre.

謹代表香港生產力促進局祝賀香港應用科技研究院成立25周年。

生產力局與應科院一直致力推動香港科技創新發展,大家各展所長,共築香港創科生態系統。過去25年,生產力局見證應科院以科技賦能產業發展。適逢貴院銀禧誌慶,謹向全體同仁致以衷心祝賀。

展望下一章,祝應科院再創高峰,為建設香港成為國際創新科技中心貢獻更多力量。





Ms Teresa Yang Ming-yen
楊敏賢女士
JP

Chairman of The Hong Kong Research
Institute of Textile and Apparel
香港紡織及成衣研發中心主席

Ir Professor Alan Lam
林曉鋒教授·工程師
JP

Chairman of the Logistics and
Supply Chain MultiTech R&D Centre
物流及供應鏈多元技術研發中心主席



As Chairman of The Hong Kong Research Institute of Textiles and Apparel (HKRITA), it is my honour to extend congratulations to the Hong Kong Applied Science and Technology Research Institute (ASTRI) on the occasion of its Silver Jubilee. This milestone is a testament to ASTRI's commitment to advancing applied research and fostering technological innovation for the betterment of society.

At HKRITA, we share a common vision with ASTRI: leveraging technology and innovation to drive progress and improve the quality of life across all sectors of society. Our research initiatives, which focus on increasing industry advantage, fostering sustainability and enhancing social benefits, align with ASTRI's mission of applying scientific research to address practical, real-world challenges.

HKRITA and ASTRI, together with a fellow research institute, once joined hands on a project aimed at improving the quality of elderly care in our community, experiencing firsthand the transformative power of the applied research. Beyond the elderly sector, HKRITA's solutions cater to a wide range of societal stakeholders, including municipal authorities, the sports sector, patient care and agriculture. These endeavours resonate with the theme "Tech for Everyone" featured in this Silver Jubilee Booklet.

As we commemorate ASTRI's 25 years of excellence, we also celebrate the shared journey of innovation and collaboration that has facilitated Hong Kong's development. We look forward to continuing our partnership and exploring new frontiers in technology and innovation together.

於香港應用科技研究院慶賀銀禧之際，作為香港紡織及成衣研發中心主席，我謹代表研發中心致以摯誠祝賀，並同時祝賀應科院於致力推動應用研究、促進科技創新及造福社會方面到達又一個里程碑。

香港紡織及成衣研發中心與應科院均透過技術和創新來推動社會各層面的進步，提升生活質素。研發中心的研究著重增加行業優勢，促進可持續發展，造福社會，與應科院以科學研究來解決實際挑戰的使命相契合。

我們與應科院及另一所研究機構曾緊密合作，共同開發了一個旨在改善社區護老服務系統的項目，實證了應用研究的實用效果。除了長者，研發中心的技術亦適用於市政、體育、病人護理和農業等廣泛的社會層面。這些努力正正符合銀禧紀念冊科技造福每一個人「Tech for Everyone」的主題。

在祝賀應科院25載成功之際，我們也慶祝這段促進香港發展的創新合作旅程。期待兩所研發機構繼續攜手合作，共同探索技術創新的新領域。

On behalf of the Logistics and Supply Chain MultiTech R&D Centre (LSCM), I would like to extend my heartfelt congratulations to the Hong Kong Applied Science and Technology Research Institute (ASTRI) on your 25th anniversary.

Having served ASTRI for a decade as a vetting committee member and board member, I have witnessed firsthand your unwavering commitment to advancing technology and fostering innovation in Hong Kong. Your remarkable achievements over the past 25 years have significantly contributed to the growth and development of our city's technology sector, bolstering its position on the global stage.

This milestone is not only a testament to ASTRI's dedication and excellence but also an inspiration for all of us in the industry. The innovative solutions and cutting-edge research you have spearheaded have paved the way for new opportunities and have had a profound impact on society.

As we look to the future, I am excited about the continued collaboration between ASTRI and LSCM. Together, we can further drive technological advancement, enhance industry competitiveness, and contribute to the sustainable development of Hong Kong and beyond.

Once again, congratulations on your silver jubilee. May ASTRI continue to achieve new heights and spearhead innovation for many years to come.

我謹代表物流及供應鏈多元技術研發中心（LSCM），衷心祝賀香港應用科技研究院成立25周年。

過去十年，我有幸以評審委員會成員和董事會成員的身份參與ASTRI的發展歷程，親身見證了你們對推動香港科技進步和創新發展的堅定承諾。過去25年來，你們的卓越成就為本港科技界的成長和發展作出了重大貢獻，提升了香港在全球的地位。

這一重要的里程碑，不僅彰顯了ASTRI的貢獻和卓越，亦激勵著我們整個行業。你們所領導的創新方案和尖端研究，為新的機遇鋪平了道路，對社會產生了深遠的影響。

展望未來，我期待ASTRI與LSCM的持續合作。我們將共同推動科技進步，提升行業競爭力，為香港乃至更廣泛地區的可持續發展作出貢獻。

再次熱烈祝賀你們的銀禧慶典。祝願ASTRI繼續蒸蒸日上，在未來的歲月裡引領創新，創造更多輝煌成就。

此致敬賀！

25 YEARS OF EXCELLENCE

默默耕耘 碩果累累

TECH
FOR
EVERYONE ●

WHO WE ARE

認識應科院



Hong Kong Applied Science and Technology Research Institute (ASTRI) was founded by the Government of the Hong Kong Special Administrative Region (HKSAR) in 2000. Our mission is to enhance Hong Kong's competitiveness through applied research.

香港應用科技研究院(應科院)由香港特別行政區政府於2000年成立，其使命是透過應用科技研究提升香港的競爭力。



Over the years, ASTRI has nurtured a pool of research and innovation and technology (I&T) talents, generating I&T benefits for the community. We have earned numerous international accolades for our pioneering innovations as well as exemplary contributions to both business and society.

ASTRI's core R&D competence is grouped under five Technology Divisions: Advanced Electronic Components and Systems; Artificial Intelligence and Trust Technologies; Communications Technologies; Intelligent Perception and Control Technologies; and IoT Sensing and AI Technologies. These are applied across six core areas, which are Smart City, Financial Technologies, New Industrialisation and Intelligent Manufacturing, Digital Health, Application Specific Integrated Circuits and Metaverse.

多年來，應科院致力培育研究及創科人才，為廣大社群提供創科效益，通過其技術創新及對工商業界和社區作出貢獻，屢獲國際殊榮。

應科院的主要科技研發領域可歸納於五個技術部門，包括：先進電子元件及系統、人工智能及可信技術、通訊技術、智能感知與控制技術、物聯網感測與人工智能技術。技術研發主要應用在六項重點範疇：智慧城市、金融科技、新型工業化及智能製造、數碼健康科技、專用集成電路及元宇宙。

OUR VISION

我們的願景

Enhance Hong Kong's competitiveness in the technology-based industries through applied research.

透過應用科技研究，協助發展以科技為基礎的產業，藉此提升香港的競爭力。

OUR MISSION

我們的使命

- ▶ Conduct relevant and high-quality research and development for transfer to industry
- ▶ Encourage collaboration among government, industry, academia and research
- ▶ Foster wider adoption of innovation and technology (I&T)
- ▶ Nurture Hong Kong's I&T talents
- ▶ and Promote Hong Kong's I&T advantages

- ▶ 進行相關及高質素的科技研發工作，並把科研成果轉移給不同產業應用
- ▶ 鼓勵「政產學研」合作
- ▶ 推動更廣泛應用創新科技
- ▶ 培育香港創科人才
- ▶ 以及推廣香港創科優勢

OUR VALUES

我們的核心價值



Accountability 問責

We work in an ethical, honest, open and fair manner and are responsible for our actions.
我們恪守專業操守，以誠實的態度和公開公平的原則處事，並承擔責任。



Service 服務

We render timely and world-class services to our stakeholders.
我們為不同的持份者提供適時並達世界水平的服務。



Tenacity 堅毅

We strive to overcome all challenges to the best of our ability.
我們百折不撓，竭盡所能，克服挑戰。



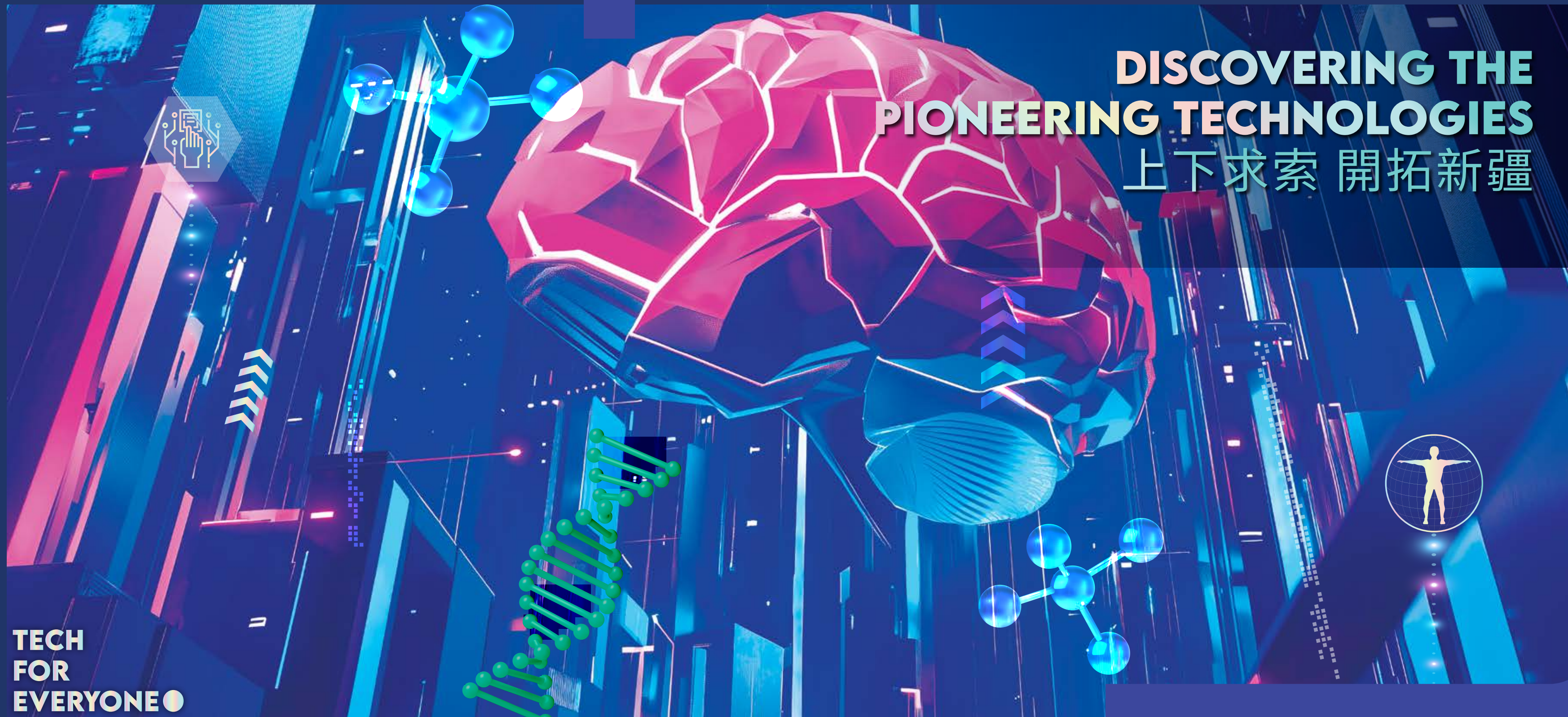
Respect 尊重

We give due respect to others and ourselves, to establish and support an environment of teamwork and growth.
我們律己敬人，以建立團體精神，促進個人成長。



Innovation 創新

We innovate to advance for Hong Kong, our country and the world.
我們致力創新，造福香港、國家和世界。



DISCOVERING THE PIONEERING TECHNOLOGIES

上下求索 開拓新疆

TECH
FOR
EVERYONE●

ASTRI MILESTONES

應科院發展里程碑

2001

In 2001, ASTRI began operations and recorded its first revenue in 2003. 應科院於2001年開始營運，並於2003年首次錄得收入。



2004

In 2004, ASTRI completed its first spin-off of a photonic technology company to SAE Magnetics. 2004年成功完成首項業務分拆，出售旗下光子技術公司予新科實業有限公司。



2005
2006

In 2005, ASTRI was granted its first US patent. 2005年獲批首項美國專利。

ASTRI transferred its wireless technologies and WiFi technologies for industry applications in 2005 and 2006 respectively. 應科院分別於2005及2006年把無線電技術和WiFi無線上網技術轉移予業界應用。

In 2006, the Innovation and Technology Commission designated ASTRI as the Hong Kong R&D Centre for Information and Communications Technologies. 2006年獲創新科技署指定為資訊及通訊技術研發中心。



2008

In 2008, ASTRI established a wholly-owned subsidiary, the ASTRI Science and Technology Research (Shenzhen) Co Ltd, and was granted its first patent in China. 於2008年成立應科院科技研究(深圳)有限公司為全資子公司及獲批首項中國專利。



2012

In 2012, ASTRI partnered with Southeast University to establish the Hong Kong Branch of National Engineering Research Centre for Application-Specific Integrated Circuit System, with the approval from the State Ministry of Science and Technology. 於2012年獲國家科學技術部批准，與南京東南大學合作成立國家專用集成電路系統工程技術研究中心(香港分中心)。



2016

In 2016, ASTRI and Marvel Digital Limited established the Joint Research and Development Centre, scaling new heights in research on 3D imaging and other innovations. 2016年，應科院與萬維數碼有限公司成立聯合研發中心，在三維影像和其他創新研發中取得突破。



2017

In 2017, ASTRI co-developed digital identity solutions with TransUnion to enhance financial institutions' Know-Your-Customer compliance processes and enhance operational efficiency. 2017年，應科院與環聯合作，共同開發數碼身份認證技術，以助金融機構優化「認識你的客戶」的合規流程並提升營運效率。



2016

In 2016, ASTRI partnered with the Hong Kong Police Force to set up a Cyber Range Laboratory to provide cybersecurity training services. 2016年，應科院夥拍香港警務處成立「網絡安全研究與培訓中心」，提供網絡安全培訓服務。



In 2016, ASTRI conducted research on distributed ledger technology (DLT) for the Hong Kong Monetary Authority, and published a white paper. 2016年，應科院為香港金融管理局進行分佈式分類帳技術研究計劃，並發表白皮書。



2018

In 2018, ASTRI contributed to Mainland China's first Third-Generation Semiconductor Power Electronics Technology Roadmap. 2018年，應科院參與編撰內地首份《第三代半導體電力電子技術路線圖》。



In 2018, ASTRI and Huawei Technology Co Ltd signed an agreement to establish a joint connected vehicle (C-V2X) research group. 2018年，應科院與華為技術有限公司簽署協定，成立「華為-香港應科院車聯網(C-V2X)聯合研發工作組」。



2019

In 2019, ASTRI organised the Technovation Summit, bringing together leading minds in innovation and technology. 2019年，應科院舉辦「創科峰會」，匯聚創科界傑出領袖和技術專家。



2020

ASTRI's "Key Technology and Complete Set of Processes for High Density and High Reliability Electronic Packaging" R&D project won a First-class Prize of the 2020 State Scientific and Technological Progress Award. This national-level accolade represents the highest honour ever achieved by an R&D institution affiliated with the HKSAR Government in the field of electronic packaging.

應科院的「高密度高可靠電子封裝關鍵技術及成套工藝」項目，獲得了2020年度國家科學技術進步一等獎。這是香港特區政府屬下研發機構，在電子封裝領域參與國家級別獎所獲得的最高榮譽。此次獲獎肯定了應科院多年來與內地單位，產學研用的合作成果，該成果突破了高密度高可靠電子封裝技術的瓶頸，促進中國電子製造業的快速發展。



Commissioned by the Hong Kong Monetary Authority (HKMA), ASTRI published a white paper titled "Alternative Credit Scoring of Micro-, Small and Medium-sized Enterprises (MSMEs)" in 2020, which outlines how FinTech can be adopted to collect and utilise alternative data to evaluate borrowers' creditworthiness and thus improve banks' business scale of their existing MSMEs financing services and the access to finance for MSMEs. 2020年，應科院應香港金融管理局，發表《中小微企業替代信貸評估》白皮書，闡釋如何運用金融科技收集和利用替代數據，以評估借款人的信貸質素，從而擴大銀行中小微企融資服務的規模和提升企業獲得融資的機會。





2021

In 2021, ASTRI launched cellular vehicle-to-everything (C-V2X) public road tests in Hong Kong, laying an important foundation in smart mobility, enhancement in road safety and efficiency, as well as the next steps towards the future development of autonomous vehicles.

2021年，應科院在香港啟動車聯網(C-V2X)公路測試，為推動智慧出行、提升道路安全和交通效率，以至未來自動駕駛汽車發展，奠下重要基礎。



2022

In 2022, ASTRI established the Microelectronics Technology Consortium.

2022年，成立「微電子技術聯盟」。



2023

In 2023, ASTRI established the Smart Mobility Technology (C-V2X) Alliance.

2023年，成立「智慧出行車聯網技術」聯盟。



In 2023, ASTRI's Technovation Centre opened, providing an I&T networking platform to showcase Hong Kong's leading R&D achievements.

2023年，「創新科研中心」開幕，提供創科交流平台，展示香港領先的科研成果。



In 2023, ASTRI and MTR Corporation signed a Memorandum of Understanding (MoU) to explore innovative solutions and technology applications for smart railways.

2023年，應科院與港鐵公司簽訂合作備忘錄，善用創新方案和科技應用，攜手打造智慧鐵路。



In 2023, ASTRI signed an MoU with Housing Bureau to explore innovative technology solutions for enhancing construction efficiency and safety, as well as optimising property management processes.

2023年，應科院與房屋局簽訂合作備忘錄，共同探索創新科技解決方案，提高建造安全及效率、優化物業管理流程。



2024

In 2024, ASTRI Science and Technology Research (Shenzhen) Co Ltd relocated to Futian, becoming the first Hong Kong R&D Centre to establish a presence in the Hetao Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone. In June, ASTRI launched the cross-border smart connected autonomous vehicle driving tests.

2024年，應科院科技研究(深圳)有限公司落戶福田，成為香港首家在河套深港科技創新合作區設據點的香港研發中心，並於同年6月啟動跨境智慧網聯自動駕駛測試。



In 2024, ASTRI established the FinTech & ESG Alliance.
2024年，成立「金融科技與永續發展聯盟」。



In 2024, ASTRI signed a contract and an MoU with the National Science and Technology Development Agency and the National Credit Bureau Company Limited respectively to collaborate in smart mobility, FinTech, AI and more.
2024年，應科院與泰國國家科技發展局及泰國國家信用局分別簽署合約和合作備忘錄，就智慧出行、金融科技、人工智能等領域展開合作。



In 2024, ASTRI published its first research report on Hong Kong Connected & Autonomous Vehicle (CAV) Development.
2024年，發表首份有關香港網聯自動駕駛汽車發展的研究報告。



In 2024, ASTRI signed an MoU with the Immigration Department to promote the utilisation of innovative technologies for providing high-quality and efficient public services.
2024年，應科院與入境處簽署合作備忘錄，善用創新科技應用以進一步提供更高效優質的公共服務。



In 2024, ASTRI established the ConTech & PropTech Alliance.
2024年，成立「建築及房地產科技聯盟」。



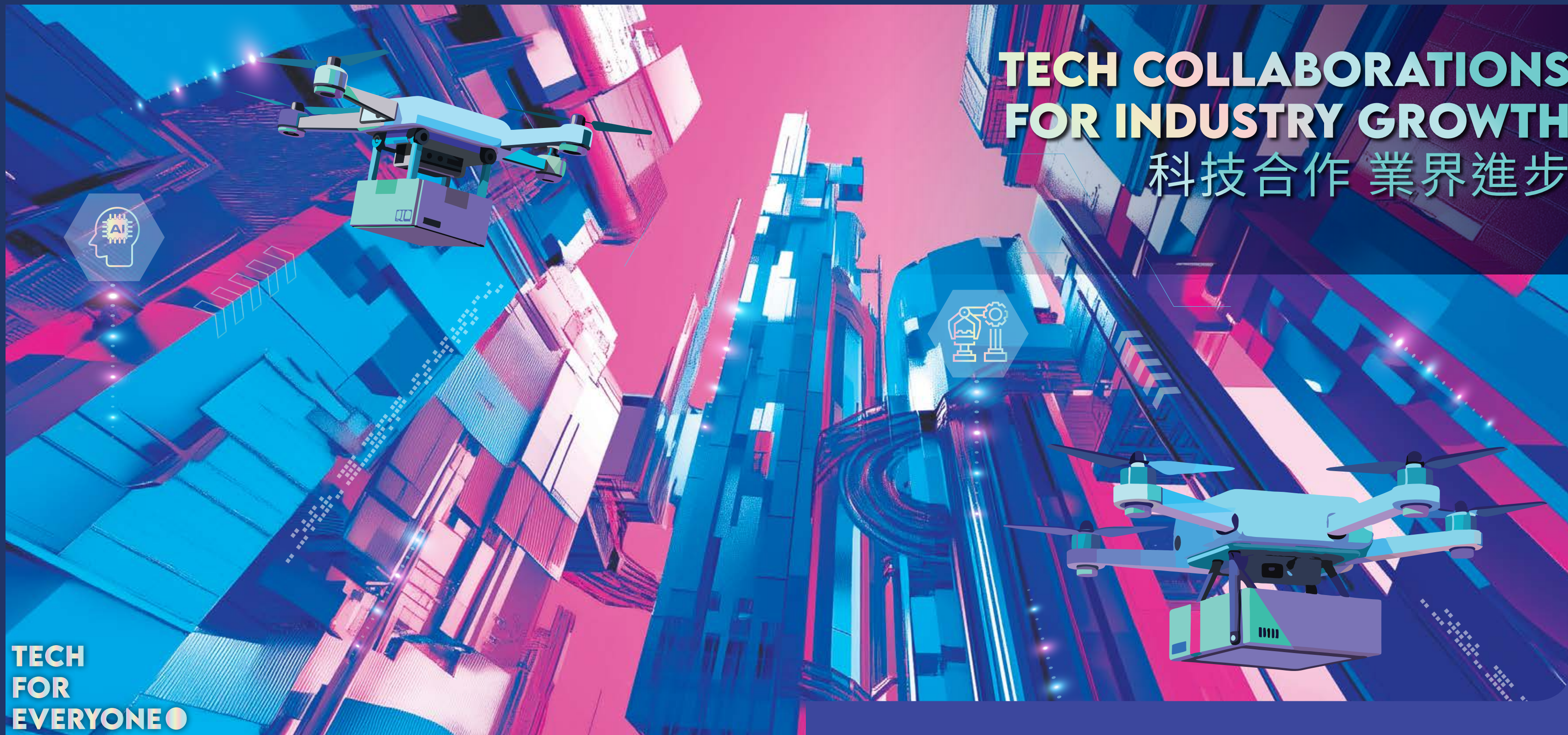
In 2024, the new office of ASTRI Science and Technology Research (Shenzhen) Co Ltd at the Hetao Shenzhen-Hong Kong Science and Technology Innovation Cooperation Zone officially opened.
2024年，應科院科技研究(深圳)有限公司位於「河套深港科技創新合作區」的辦事處正式揭幕。



2025

In 2025, ASTRI celebrates its 25th Anniversary.
2025年，應科院慶祝成立25周年。







In December 2014, Infineon Technologies signed a Memorandum of Understanding (MoU) with ASTRI and Hong Kong Science and Technology Parks Corporation (HKSTP) to establish long-term collaboration on advancing thermal management solutions for high-power density applications. The partnership was designed to address specific market requirements across mainland China and Hong Kong. This enabled Infineon's customers in the telecommunications and motor drive sectors to benefit from streamlined, one-stop solutions and reduced time-to-market for their products.

2014年12月，英飛凌科技股份有限公司與應科院及科技園公司簽訂合作備忘錄，三方建立長期合作關係，共同開發專為中國內地及香港的高功率應用市場需要而設的熱能管理解決方案。通過這次合作，英飛凌的電訊及電機驅動產業客戶獲得一站式的解決方案，從而縮短產品推出市場所需的時間。



In January 2015, ASTRI signed a technology transfer agreement with Sunming Technologies (HK) Limited. The transfer involved the licensing of 12 patents of ASTRI's batch-processed chip scale auto-focus camera technologies to Sunming on a non-exclusive basis for 10 years. These disruptive technologies constituted a low-cost and highly efficient solution for Sunming to produce miniaturised auto-focus camera modules tailored for smart phones, tablets and other portable consumer electronic products.

2015年1月，應科院將旗下12項「批次處理自動對焦攝影機技術」以非獨家形式授權予三鳴科技(香港)有限公司，為期10年。這些突破性的創新技術為三鳴科技提供一個低成本而且高效率的解決方案，來生產專用於智能手機、平板電腦和其它便攜式消費電子產品的微型自動對焦攝像頭模塊。



In July 2015, ASTRI and Shanghai Huahong Integrated Circuit Co Ltd (SHHIC) opened a joint laboratory on wireless Internet of Things (IoT) technologies and applications, fostering the collaboration between ASTRI and SHHIC and developing single-chip system level solutions for smart cities and intelligent transportation applications.

2015年7月，應科院與上海華虹集成電路有限責任公司合作成立「無線物聯網技術及應用聯合研發中心」，促進雙方合作，共同研發單芯片系統級整體方案，適用於智慧城市和智能交通的應用上。



In May 2016, ASTRI and Comba Telecom Limited established the "ASTRI-Comba Joint Research and Development Laboratory", focusing on smart city and smart home technologies.

2016年5月，應科院與京信通信有限公司共同成立「應科院—京信通信聯合研發實驗室」，重點發展智慧城市和智能家居的科技。



In July 2016, ASTRI and Airport Authority Hong Kong signed an agreement to establish the "ASTRI-HKIA Joint Research and Development Centre for Smart Airport" (Centre). The Centre focused on the research on a number of new technologies that could help transform Hong Kong International Airport into a smart airport, and Hong Kong into a smart city.

2016年7月，應科院與機管局簽署合作協議，共同成立聯合研發中心，重點研發多項嶄新技術以配合香港國際機場發展成為智慧機場，促進智慧城市發展。



In July 2016, ASTRI and Bank of China (Hong Kong) Limited (BOCHK) signed an MoU to establish the "BOCHK-ASTRI FinTech Collaboration Centre", aimed at developing the latest financial technologies (FinTech) for application in the banking industry, fostering FinTech's development in Hong Kong.

2016年7月，應科院與中國銀行(香港)簽署合作備忘錄，共同成立「中銀香港—應科院金融科技聯合創新中心」，旨在研發能應用於銀行業務的嶄新金融科技，推動香港金融科技的發展。



In October 2016, ASTRI collaborated with PCCW Group on the 3GPP Release 13 LTE WiFi Aggregation (LWA) trial. LWA improved users experience by offering faster and more stable Internet service and better overall system performance, through efficient management of radio resources across both LTE and Wi-Fi networks. The proposed LWA trial enabled ASTRI and PCCW Group to collect important field data.

2016年10月，應科院與電訊盈科集團合作進行3GPP Release 13版本LTE WiFi無線網絡聚合試驗。透過有效管理LTE和Wi-Fi網絡的無線資源，無線網絡聚合能提供快速和更穩定的互聯網服務，達至更優良的整體系統性能，有助提升用戶的體驗。應科院和電訊盈科集團在無線網絡聚合試驗的合作，可讓雙方收集重要的實質數據。



In October 2016, ASTRI and The Hongkong and Shanghai Banking Corporation Limited (HSBC) established the HSBC-ASTRI Research and Development Innovation Laboratory. The Chinese character recognition system was one of the first application technologies designed, aimed at enhancing labour-intensive procedures such as form processing.

2016年10月，應科院與香港上海滙豐銀行有限公司成立「滙豐－應科院聯合研發創新實驗室」，其中一項應用範疇是人工智能中文字識別技術，提升滙豐人手處理表格工作的效率。



In December 2016, ASTRI worked with Delphi's Infotainment & Driver Interface team in China on advanced research and development of intelligent digital display applications for automobiles. At the same time, Delphi-ASTRI Digital Optical Simulations Joint Laboratory was set up to focus on research and development of advanced digital optical technologies including quantum dot laser light source, phase modulators based on liquid crystal on silicon panels, 2D holographic projector modules, and computer generated holography algorithm in vehicle augmented reality display and sensing systems.

2016年12月，應科院與德爾福在中國的資訊娛樂和駕駛者介面團隊合作，研發應用於汽車的先進智能數字顯示系統，並共同成立了「德爾福－應科院數字光學模擬聯合實驗室」，就各種先進的數字光學技術進行設計和研發，如量子點鐳射光源、相位型矽基液晶(LCoS)、二維全息投影模組及成像算法在車載擴增實境顯示及感測系統等。



ASTRI successfully developed commercial-grade TD-LTE technologies for its customer to build the railway Communication-based Train Control (CBTC) signaling network system. Deployed at the Wuhan Metro Line 6 in 2016, it was the first subway signaling system in China using the LTE technologies.

應科院成功研發商用級TD-LTE小基站技術，讓其合作夥伴使用該技術建立基於通訊的列車控制系統。此地鐵路訊號系統已應用於2016年通車的武漢地鐵6號線，是中國首個使用LTE技術的地鐵路訊號系統。



In February 2017, ASTRI and Zhongke Laifang Energy Technology (Hong Kong) Limited signed an MoU to establish a joint laboratory to drive R&D for next generation energy storage systems that are safe, efficient, and eco-friendly. With 25% higher volumetric energy density compared to conventional lead-acid batteries, the new energy storage system can be applied in light electric vehicles, start-stop power source for passenger vehicles, grid energy storage system, and communication backup power sources.

2017年2月，應科院與中科來方能源科技(香港)有限公司簽訂合作協議，共同成立聯合實驗室，推動研發安全、高效及環保的新一代儲能系統。相比傳統的儲能系統，新研發的儲能系統的電源性能可提高25%，並可應用在輕型電動車、汽車啟動電源、電網儲能、通訊後備電源等範疇。



In June 2017, ASTRI and Industrial and Commercial Bank of China (Asia) Limited signed an MoU to launch ICBC (Asia)-ASTRI FinTech Innovation Laboratory, aiming to develop latest financial technology applications in banking business and promote FinTech Development in Hong Kong. The Laboratory carried out research and development with a focus on blockchain technology, big data analytics, behavioural biometrics authentication, artificial intelligence customer service, artificial intelligence on Chinese characters recognition, internet finance and cyber security.

2017年6月，應科院與中國工商銀行(亞洲)有限公司簽署合作備忘錄，共同成立「工銀亞洲－應科院金融科技創新實驗室」，旨在研發應用於銀行業務的嶄新金融科技，推動香港金融科技發展。創新實驗室將會開展多個項目的研發，重點領域包括：區塊鏈技術、大數據分析、生物行為識別、智能客服、人工智能中文字識別、電子金融及網絡安全等。



Integrated Media Technology Limited (IMT) successfully listed on Nasdaq in 2017. IMT's investments include ASTRI's long-term partner, Marvel Digital. Through its partnership with Marvel Digital, ASTRI's naked eye 3D technology has been applied into a range of commercially successful products, such as phones, flat-panel computer screens, and ultra-high-definition 4K display screens. In addition, ASTRI and Marvel Digital have pursued the development of advanced 3D technologies for television movies and shows through a Joint R&D Centre.

Integrated Media Technology Limited (IMT)於2017年在美國納斯達克股票市場成功上市。IMT的投資包括收購和應科院合作多年的萬維數碼有限公司。雙方過去開發的裸眼3D技術，已成功應用於其產品上，包括電話、平板電腦和超高清4K顯示屏等。此外，應科院與萬維數碼共同成立「香港應科院－萬維數碼聯合研發中心」，重點發展前瞻的3D影像科技研發。



In March 2018, ASTRI and the International Iberian Nanotechnology Laboratory signed a collaboration agreement to set up a joint innovation laboratory to pursue cutting-edge and interdisciplinary research for overall smart city development.

2018年3月，應科院與International Iberian Nanotechnology Laboratory簽署合作協議，成立聯合創新實驗室，為智慧城市的整體發展進行跨領域的先進技術研究。



In February 2019, New World Development Company Limited announced the launch of Hong Kong's first property-purchase blockchain platform, in collaboration with ASTRI. Bank of China (Hong Kong) was the first bank to participate and apply the new platform to its services. Advanced blockchain technology was adopted to provide an all-in-one support service to buyers, banks and related bodies. Driving the development of PropTech, this collaboration reshaped Hong Kong's real estate industry and provided first-time buyers a faster and more convenient user experience.

2019年2月，新世界發展有限公司宣佈與應科院合作，開創香港首個置業區塊鏈跨界平台，中國銀行（香港）為首家應用該平台的銀行。該平台利用區塊鏈（Blockchain）先進技術，為新樓買家、銀行及相關機構提供一站式的支援系統。是次合作引領本港房地產業的PropTech發展，為一手樓買家提供更方便快捷的置業體驗。



In June 2019, ASTRI and CITIC Telecom International CPC Limited, a wholly-owned subsidiary of CITIC Telecom International Holdings Limited announced plans to join forces on research and development for next-generation operations and maintenance technologies using Augmented Reality glasses.

2019年6月，應科院與中信國際電訊集團有限公司全資擁有的中信國際電訊（信息技術）有限公司攜手合作，共同研究和開發採用擴增實境（AR）智能眼鏡的新一代操作及維護技術。



In October 2021, ASTRI partnered with tech-forward companies to harness Federated Learning, a privacy-preserving technology, to develop artificial intelligence (AI) models. These models generated encrypted parameters, serving as a reference for financial institutions conducting comprehensive credit analyses of micro, small and medium-sized enterprises to facilitate their access to financing. ASTRI's partners included Standard Chartered Bank (Hong Kong) Limited; Ping An OneConnect Bank (Hong Kong) Limited, the first virtual bank serving MSMEs in Hong Kong; OpenRice, a Hong Kong restaurant guide and review platform; and FreightAmigo, a logistics and freight pricing platform.

2021年10月，應科院與渣打銀行、香港首間中小企專屬的虛擬銀行平安壹賬通銀行（香港）有限公司、香港餐廳指南及食評搜尋器開飯喇（OpenRice），以及物流貨運格價平台 FreightAmigo，攜手利用保障私隱技術「聯盟式學習」，在各自的設備內訓練人工智能模型，再以經加密參數形式輸出，供金融機構參考，更全面地為中小微企進行信貸評估，協助企業加快融資速度。



In June 2022, ASTRI and the AI Chip Center for Emerging Smart Systems (ACCESS) signed an MoU to jointly promote the R&D and industrialisation of AI chips, with the aim of advancing Hong Kong's AI chips to world-leading standard.

2022年6月，應科院與智能晶片與系統研發中心簽署合作備忘錄，共同推動智能晶片（AI Chips）的研發和產業化，以進一步帶動本港智能晶片發展達至世界尖端的水平。



In July 2022, ASTRI collaborated with the Centre for Eye and Vision Research to develop at least two projects designed to treat patients of varying ages suffering from lazy eye and other ocular conditions. The initiative aimed at utilising augmented reality and integrated navigation systems to help visually-impaired patients achieve clearer vision.

2022年7月，應科院與眼視覺研究中心（CEVR）合作研發最少兩項可以協助治療不同年紀及程度的弱視等眼睛疾病的患者，冀透過擴增實境及綜合導航系統助眼疾患者看清世界。



In July 2022, ASTRI announced its collaboration with Lenovo to launch the second phase of Cellular Vehicle-to-Everything (C-V2X) Technology motorway testing. Utilising high-speed, reliable and low-latency 5G network technology, the project aimed to explore the application scenarios of C-V2X technology on Hong Kong roads, as well as required networks and related infrastructure. The initiative sought to promote smart mobility, enhance road safety and traffic efficiency, and support the future development of connected autonomous vehicles.

2022年7月，應科院宣佈夥拍Lenovo開展第二階段的車聯網（C-V2X）公路測試，以高速、可靠和低延遲的5G網絡技術，研究及測試車聯網技術在香港道路的應用場景、所需的網絡及相關基建，旨在推動智慧出行、提升道路安全和交通效率，以及未來聯網自動駕駛汽車的發展。



In January 2023, ASTRI and Unity Drive signed a strategic cooperation memorandum of understanding to advance local autonomous driving capabilities. The partnership established comprehensive collaboration focused on developing Hong Kong's autonomous driving ecosystem.

In terms of market applications, both parties accelerated research and development, testing, and licence applications for autonomous driving, facilitating the deployment of self-driving cars on Hong Kong's public roads. On the infrastructure front, both parties collaborated to explore and implement autonomous driving and vehicle-to-everything (V2X) technologies throughout Hong Kong.

2023年1月，應科院與一清創新簽署戰略合作備忘錄，賦能本地自動駕駛。雙方將圍繞香港自動駕駛產業展開全面合作。在市場應用方面，雙方將加快自動駕駛的研發、測試、牌照申請工作，推動無人車在香港實際道路運行；在基礎建設方面，雙方將共同探索，推進自動駕駛與車聯網（V2X）技術在香港落地應用。



In May 2023, ASTRI and Baidu Apollo signed an MoU to jointly promote the implementation of autonomous driving and C-V2X technology in more scenarios in Hong Kong, as well as to explore cooperation opportunities in building High-Definition Maps, further enhancing Hong Kong's smart mobility ecosystem.

2023年5月，應科院與百度智能交通簽署合作備忘錄，共同推動在香港更多場景應用自動駕駛及車聯網技術，並探索高精地圖領域的合作，進一步完善香港智慧出行生態圈。



In October 2023, ASTRI signed an MoU with the National Centre of Technology Innovation for EDA. The collaboration aimed to establish a Hong Kong branch of the Centre, promoting the commercialisation of advanced research and development achievements in integrated circuit EDA tools. It also sought to draw technologies and talents from home and abroad, creating the first international platform for the EDA industry in the country.

2023年10月，應科院與國家集成電路設計自動化技術創新中心（EDA國創中心）簽訂合作備忘錄，推動設立EDA國創中心香港分中心，促進集成電路EDA工具先進研發成果的商業化應用，引進海內外技術和人才資源，打造國家首個EDA產業的國際化平台。



ASTRI signed an MoU with the Federation of Malaysian Manufacturers (FMM) in November 2024 to support the digital transformation of Malaysia's diversified industries. The MoU leveraged ASTRI's homegrown smart manufacturing technologies to help modernise FMM members' operations.

應科院與馬來西亞廠商聯合會（FMM）於2024年11月簽署合作備忘錄，善用應科院於香港本地研發的智能製造科技，協助大馬不同產業數碼轉型和優化業務流程。



ASTRI organised Tech Applied Summit in February 2025, and signed MoUs with SUTPC Digital Technology (Hong Kong) Limited and ConnectX Technology Limited, as well as Prophesee (France), Smart City Association (Korea) and Westwell Holdings (Hong Kong) Limited respectively, laying a solid foundation for technology transfer across industries in the future.

應科院於2025年2月舉辦「應用科技高峰會」，並於會上分別與深城交數字科技和灣區互聯科技有限公司、法國Prophesee、韓國智慧城市協會、以及西井控股(香港)有限公司簽署合作備忘錄，為日後技術轉移及應用在不同行業奠定基礎。



DISTINGUISHED LEADERS GUIDING OUR PATH 傑出領袖 照亮前路

TECH
FOR
EVERYONE●

Dr Allan Wong Chi-yun
黃子欣博士
GBS, MBE, JP



First Chairman Shares the Founding Story of ASTRI 首任主席暢談應科院成立故事

In March 1998, the Hong Kong Special Administrative Region Government announced the establishment of the Innovation and Technology Commission, which aims to formulate a long-term plan for technology development in Hong Kong. The Commission submitted its first report to the Government in September of the same year, and the main recommendations were accepted by the then Chief Executive, Mr Tung Chee-hwa, including the establishment of a HK\$5 billion Innovation and Technology Fund and the establishment of the Hong Kong Applied Science and Technology Research Institute (ASTRI).

ASTRI was officially established in 2000, and Dr Allan Wong Chi-yun was appointed as its first Chairman.

1998年3月，香港特別行政區政府宣布成立創新科技委員會，負責制定香港未來科技發展的長期規劃。同年9月，委員會向港府提交首份報告，當中的主要建議被時任行政長官董建華先生接納，包括設立50億元的創新及科技基金，以及成立香港應用科技研究院。



香港應用科技研究院於2000年正式成立，黃子欣博士獲特區政府委任為首任主席。

Innovative Technology Drives Hong Kong's Transformation

Over the past 25 years, ASTRI has become a key driver of innovation and technology in Hong Kong. Reflecting on ASTRI's 25-year journey, Dr Wong recalls the story behind its founding, saying: "Hong Kong's economy developed rapidly in the 1980s and 1990s, but as its structure transformed, Hong Kong's industrial sector became relatively weak. Although Hong Kong's university research work had reached international standards, its connection with industry was limited. ASTRI therefore had a very important mission, namely to serve as a bridge between Hong Kong's industrial and academic communities, promoting the commercialisation of research projects, encouraging the broader adoption of technology across industries and attracting more innovation and technology talent from around the world to achieve a clustering effect."

When ASTRI was first established in 2000, it had only about 20 employees, mainly researchers. Dr Wong notes that ASTRI's positioning was clear, focusing on the development of midstream technology, with a particular emphasis on practicality. ASTRI had three core functions:

- Providing a platform for technological talent to showcase their abilities
- Licensing R&D outcomes to industry to support upgrading and transformation
- Spinning off technologies with market potential to accelerate commercialisation

創新科技 助港轉型

時光飛逝，香港應用科技研究院已經走過25個年頭，成為了香港創新科技的重要推動者。黃子欣博士回憶成立應科院的初衷，說道：「香港經濟在80、90年代迅速發展，而隨着產業結構轉型，香港的工業結構變得相對薄弱。雖然本地大學的科研達國際水平，但與工業界的聯繫有限。因此應科院肩負重大使命，就是成為香港產業界和學術界的橋樑，推進科研成果商業化，鼓勵各行各業更廣泛應用科技，並吸引全球創科人才來港，形成群聚效應。」

應科院創立初期僅有約20名員工，主要為研發人員。黃博士表示，應科院的定位明確，聚焦發展中游科技，特別強調實用性。應科院有三大核心功能：

- 為科技人才提供發揮所長的平台
- 將研發成果授權業界應用，協助產業升級轉型
- 把具市場潛力的科技分拆，加快產業流轉

“ WE MUST EXCEL IN INNOVATION AND TECHNOLOGY, AS THESE WILL BE KEY PILLARS OF HONG KONG’S ECONOMY.

我們一定要做好創科，這將成為香港重要的經濟支柱。



EMBRACING NEW TECHNOLOGIES 擁抱新興科技

Rapid Development Lays a Solid Foundation

Under the leadership of Dr Wong, ASTRI has successfully applied for a number of patents in just a few years, and its research projects have begun to bear fruit. The photonics packaging technology project undertaken by its subsidiary Acasia Technologies (HK) Limited is a good example. A few years after starting this research project, in 2004 ASTRI reached an agreement with SAE Magnetics to sell the technology and related assets. SAE Magnetics used this opportunity to develop a new photonics technology business in Hong Kong and expand its market. This transaction not only brought ASTRI over HK\$100 million in revenue plus three years of annual royalty fees, but also created a number of high-tech jobs in Hong Kong.

Super WiFi is another example of the successful commercialisation of ASTRI’s research. In 2002, ASTRI engineers began researching solutions to the challenges of using traditional WiFi in complex environments, particularly for industrial applications. The team then successfully developed the patented technology Super WiFi, which was spun off in 2006 as the independent company Altai Technologies. This high-performance, low-cost WiFi technology is in great demand and has achieved remarkable commercial success globally. According to Altai Technologies’ estimates in early 2025, more than half of the world’s ports are using Super WiFi.

According to Dr Wong: “The rapid development of ASTRI in the early days was undoubtedly due to our outstanding researchers. ASTRI received substantial government funding and enjoyed a high level of trust. This enabled us to recruit top talent from overseas, including Silicon Valley, laying a solid foundation for the institute and gradually expanding our areas of research. In recent years, given the increasing pool of technology talent in Mainland China and the Quality Migrant Admission Scheme, I believe ASTRI can play an even greater role in attracting talented people from different regions to work and develop their skill sets in Hong Kong.”

快速發展 奠定基礎

在黃博士帶領下，應科院在短短數年已成功申請多項專利，研究項目也開始取得成果。旗下Acasia Technologies (HK) Limited負責的光科技封裝技術項目就是很好的例子。應科院開始這研究項目數年後，於2004與新科實業(SAE Magnetics)達成協議，出售光電子封裝技術和相關資產，協助新科在港開展嶄新的光電子科技業務，並拓展市場。這筆交易不僅為應科院帶來逾億港元收入及三年專營權年費，更為香港創造一些高科技職位。

Super WiFi是應科院將研究成果成功商業化的另一例子。於2002年，應科院工程師開始研究如何克服傳統WiFi在複雜環境下的應用問題，特別針對工業場景。團隊成功研發出Super WiFi專利技術，並於2006年正式分拆成獨立公司奧泰爾科技(Altai Technologies)。這項高效能、低成本的WiFi技術市場需求龐大，商業化後於環球市場取得驕人成績。據奧泰爾科技2025年初的估算，全球超過一半的港口正在採用其Super WiFi。

黃博士說：「應科院初期的快速發展，歸功於優秀的研發團隊。應科院當時得到政府大額撥款和高度信任，讓我們可以從海外包括矽谷延攬頂尖人才，打下穩健基礎，並逐步拓展研究領域。近年中國內地科技人才湧現，加上我們的優才計劃，相信應科院能發揮更大作用，吸納不同地區科技人才來港發展。」

Innovation and Technology Development: Unlimited Opportunities

Technology is advancing at a rapid pace, and things that were once unimaginable are gradually becoming reality. For example, the rapid popularisation of artificial intelligence in recent years, which has already become part of our daily life.

Speaking of the prospects for the development of innovation and technology in Hong Kong, Dr Wong believes that Hong Kong has geographical advantages, world-class research talent and a developed information network. As long as it can make good use of resources and seize opportunities, its development will attain new heights.

“We must excel in innovation and technology, as these will be key pillars of Hong Kong’s economy. I hope that ASTRI will further strengthen its role, aligning with Mainland China’s innovation and technology policies and Hong Kong’s Innovation and Technology Development Blueprint. It will continue to attract more talent, enhance Hong Kong’s competitiveness and help realise the vision of Hong Kong becoming an international centre for innovation and technology.”

創科發展 機遇處處

科技發展日新月異，許多過去難以想像的事物已逐步實現，例如近年人工智能快速普及，已融入我們的日常生活。

談及香港創科的前景，黃博士認為香港擁有地理優勢、世界級的科研人才和發達的資訊網絡，只要善用資源、把握機遇，發展定能更上一層樓。

「我們一定要做好創科，這將成為香港重要的經濟支柱。我期望應科院未來進一步強化其角色，配合國家創科政策和香港創新科技發展藍圖，吸引更多人才，提升香港競爭力，穩步實現國際創科中心的願景。」

Dr Patrick Wang

汪穗中博士

SBS, JP

Chairman & Chief Executive Officer
Johnson Electric Group
德昌電機集團
主席及行政總裁



ASTRI's Technological Revolution: A Quarter Century of Innovation 應科院的科技革命：創新廿五載

Celebrating its Silver Jubilee, ASTRI has traversed 25 extraordinary years, establishing itself as a cornerstone of the city's innovation and technology (I&T) development. From its humble beginnings to becoming a nexus of local and global innovation ecosystems, ASTRI's story is not just a timeline of technological breakthroughs, but one of perseverance, vision, and transformative progress.

Reflecting on his tenure as Chairman from 2007 to 2013, Dr Patrick Wang underscored the institute's remarkable achievements during his leadership. Offering a firsthand account of ASTRI's journey, he described a path filled with both challenges and opportunities, cementing its role in shaping Hong Kong's I&T landscape.

踏入銀禧之年，應科院走過了25載非凡歲月，成為香港創新科技發展的中流砥柱。從創建初期的探索，到如今成為聯繫本地與全球創科生態圈的樞紐，應科院的故事不僅是一段科技創新的歷史，更是一個關於願景、毅力，以及創新的成功典範。前主席汪穗中博士在2007至2013年領導應科院期間，見證應科院取得多項重要成就，他把親身經歷娓娓道來，回顧這段挑戰與機遇並存的創科旅程。



"I had the honour of driving ASTRI towards uniting academia and industry," he stated, emphasising its pivotal role in advancing technology-based industries and fostering long-term economic growth.

"As a firm believer in the power of innovation and technology to drive economic growth, I'm proud that ASTRI played a pivotal role in promoting the growth of technology-based industries and showcasing our technological advancements on the global stage," said Dr Wang.

Driving Cross-border Collaboration

Under his leadership, ASTRI secured its first China patent in 2008. "The excitement we shared as one team was unforgettable," he recalled. Since then, ASTRI has patented over 400 technologies globally, spanning FinTech and smart city technologies during his term.

"It wasn't just about the patent itself; it represented Hong Kong's growing prominence in the technological sphere. We were positioning ourselves as a bridge between global innovation and Mainland China's burgeoning tech ecosystem."

The establishment of ASTRI's Shenzhen subsidiary in the same year proved prescient. "We recognised early on that cross-border collaboration would be crucial," he explained. The Hong Kong Branch of the National Engineering Research Centre for Application Specific Integrated Circuit System, established in 2012, further cemented this vision.

「能夠帶領應科院與學術界及業界攜手合作，我深感榮幸。」汪穗中博士強調，應科院在推動科技為本的工業發展，以及促進長遠經濟增長方面，擔當了重要角色。

「我堅信創新及科技為經濟增長帶來新動力，而應科院正是推動這股力量的領航者。」在他領導下，應科院成功展示了香港在國際舞台上的創新科技成果。

推動內地與全球合作

2008年，應科院取得首個中國專利，令汪博士至今仍記憶猶新。他笑言：「我永遠無法忘記，我們團隊當時有多激動」。在他任內，應科院在全球取得超過400項技術專利，涵蓋金融科技及智慧城市等多個領域。

「這些成績豈只是技術突破這麼簡單，更標誌着香港在創新科技領域嶄露頭角，當時應科院已經定位為聯繫全球創新科技與中國內地蓬勃發展科技生態圈的重要橋樑。」

應科院於同年成立深圳附屬公司，成為創科跨境合作的先驅者之一。「我們很早便意識到香港與內地的科技合作將成為未來發展的關鍵。」2012年，國家專用集成電路系統工程技術研究中心依託應科院開設香港分中心，進一步鞏固了應科院作為區域創科先驅的地位。

I'M A FIRM BELIEVER IN THE POWER OF INNOVATION AND TECHNOLOGY TO DRIVE ECONOMIC GROWTH

我堅信創新及科技為經濟增長帶來新動力



EMBRACING NEW TECHNOLOGIES

擁抱新興科技

Technological Breakthroughs for Everyone

When asked about concrete impacts, he pointed to several landmark achievements. “Take our iShare eP2P technology during the 2008 Beijing Olympics as an example, we enabled free Internet broadcasting when streaming technology was still nascent. Today, such capabilities might seem commonplace, but back then, it was revolutionary.”

The influence of ASTRI extends beyond its major projects, reaching deeply into local industries. For example, sustainable LED lighting and affordable Magnetic Resonance Imaging (MRI) scanning machines developed by ASTRI have delivered substantial benefits to local sectors. These innovations highlight the transformative power of cutting-edge technology in improving lives.

Creating Strategic Partnerships for the Future

Discussing the importance of partnerships, he remarked, “Collaborations have been absolutely vital to ASTRI’s success.” According to Dr Wang, by working closely with stakeholders within the ecosystem, ASTRI is able to drive innovation and bring cutting-edge technologies to market.

One exemplary partnership was with CITIC Telecom International CPC Limited, led to the creation of an Augmented Reality Remote Hand Solution which proved invaluable during the pandemic. “This showcased the power of combining different technological strengths, and it’s a perfect example of how theoretical research can translate into practical solutions.” he explained.

By combining ASTRI’s AR innovation capabilities with CITIC’s AI expertise, the solution significantly boosted field service productivity and demonstrated the practical applications of AR in enhancing remote work strategies. This highlighted the importance of working together to address real-world challenges and improve operational efficiencies across industries.

Another successful partnership was with Johnson Electric in 2016, resulted in a high-reliability and low power consumption ASIC chip for drain pumps, with production reaching over 11.8 million units as of 2024. “These aren’t just statistics,” he emphasised. “Each number represents real-world impact, jobs created, and problems solved.”

科技突破：從直播奧運到惠及各行各業

回顧應科院在科技創新上的具體影響，汪博士提及多個重要里程碑。「其中之一，是2008年，我們協助香港一家電視台以iShare eP2P技術網上直播北京奧運會，而當時的串流技術仍在萌芽階段；在今天，這項技術已普及，但在當時無疑是創舉。」

應科院的影響力不僅停留於大型項目，亦深入本地工業。例如，他提到由應科院研發的可持續LED照明及低成本磁力共振掃描器，均為本地行業帶來顯著效益，充份展現創新科技如何改變生活。

與策略夥伴攜手開創未來

談到合作夥伴的重要性，汪博士形容這是應科院成功的關鍵所在。汪博士認為，透過與科研生態圈內的持份者緊密合作，應科院得以推動創新，並為市場帶來嶄新技術。

他舉例說，與中信國際電訊CPC的合作，開發出擴增實境遠程維護解決方案，這技術於疫情期間發揮重要作用。「這不僅展示不同科技結合帶來的優勢，也充份說明理論研究如何轉化為實用解決方案。」他解釋道，這項技術結合了應科院的擴增實境創新技術，以及中信國際電訊CPC的人工智能專業，為提升遙距工作效率提供了切實可行的解決方案。這充份展現攜手合作解決現實生活中所面對的挑戰，從而改善不同行業營運效率的重要性。

另一個成功的例子，是與德昌電機合作。雙方於2016年共同研發出用於排水泵的可靠省電ASIC晶片，截至2024年，已累計生產超過1,180萬件。「這些晶片的生產不僅是一組數字，背後更代表了實實在在的影響，從創造就業機會，到解決現實問題，這些成就讓我倍感欣慰。」

Future Direction: Embracing New Technologies

As ASTRI marks its silver jubilee, Dr Wang said it represents more than a milestone. It’s a testament to Hong Kong’s technological capabilities and a promise of greater innovations to come. “We’re not just celebrating our past, but laying the groundwork for the next quarter-century of technological advancement.”

He envisioned an expanded future role. “ASTRI will likely focus on emerging technologies such as AI and machine learning, 5G and future connectivity, sustainable technologies, advance robotics, which are set to revolutionise various industries,” he added, “but success in these areas requires more than just technical expertise.”

He stressed that key to sustaining innovation will be fostering a culture of learning and maintaining strong collaborations. “You need a culture of continuous learning, strong international partnerships, and the ability to adapt quickly to changing technological landscapes. But most importantly, you need people who believe in the power of innovation to transform lives.”

World’s Leading I&T Centre

With these strategies, ASTRI is set to lead in technological advancements, contributing significantly to Hong Kong’s growth and competitiveness in the coming decade. “I wish ASTRI the best of luck in leading the way in technological advancements and contributing to the growth and competitiveness of Hong Kong,” Dr Wang concluded.

As Hong Kong continues to strengthen its position as a world’s leading innovation and technology centre, ASTRI’s role in shaping this future appears more vital than ever.

未來方向：擁抱新興科技

應科院踏入銀禧，汪博士形容這不單是一個里程碑，更印證了香港的創科實力，並意味着未來將會有更多創新技術誕生。「我們不只慶祝過去成就，也為未來四分一個世紀的科技發展奠定基礎。」

他認為應科院未來將扮演更重要的角色，聚焦人工智能及機器學習、5G及未來通訊、可持續發展、進階機械人等新興科技領域，勢必為各行各業帶來深遠影響。

然而，他強調，科技創新並非僅僅依靠專業技能。「可持續創新的關鍵在於建立不斷學習及合作的文化。」他認為，具備快速適應科技瞬息萬變的能力，以及對創新科技改善生活的信念，將是未來成功的必要條件。」

引領香港成為國際創科中心

展望未來，汪博士期望應科院能繼續引領科技發展，在未來十年為推動香港發展、提升競爭力貢獻力量。汪博士總結說：「我祝願應科院在引領科技發展之路順利前行，推動香港成為世界領先創科中心。」

隨着香港在全球創科舞台上的地位日益鞏固，應科院的角色亦顯得愈重要。它不僅推動創新科技廣泛應用，更是引領各行各業變革的推手。

Mr Wong Ming-yam
王明鑫先生
SBS, BBS, JP



Championing Innovation and Collaboration in Hong Kong's Tech Landscape 倡導香港科技創新與協作

With over 30 years of experience in consumer electronics, former ASTRI Chairman Wong Ming-yam brings a wealth of expertise in commercialising research outcomes. Beyond his professional achievements, Mr Wong is deeply engaged in community affairs and serves as a dedicated mentor to the next generation.

His passion for innovation and technology (I&T) has driven him to contribute significantly to Hong Kong's tech-related industries, enhancing their global competitiveness. Here, Mr Wong reflects on the transformative journey of the Hong Kong Applied Science and Technology Research Institute (ASTRI) under his leadership.

前應科院主席王明鑫投身消費電子業30多年，在科研成果轉化成商品方面卓有心得。他積極參與社會事務，致力扶掖後進和推動創新科技的發展，從不同層面提升香港以科技為基礎的產業競爭力，為業界建樹良多。他回顧應科院在他領導下走過的蛻變之路。



Uniting Teams Under One Roof

Having held senior management roles at multinational corporations and with extensive experience in the public sector, Mr Wong served as Chairman of ASTRI from 2013 to 2019. A cornerstone of his tenure was relocating ASTRI's scattered offices within Hong Kong Science Park into a single building. This move streamlined communications, boosted efficiency, and reduced operating costs.

"Before the relocation, it would take colleagues over 10 minutes to walk to the other end of the campus just for a meeting. Dispatching documents was also a hassle," he explained.

The consolidation of offices not only improved logistical efficiency but also fostered stronger teamwork – a crucial factor in retaining talent. He noted that maintaining a stable team was among the biggest challenges during his tenure, particularly in Hong Kong's highly competitive I&T talent market. "This requires strong teamwork, and bringing workspaces closer together was a big help in achieving that," Mr Wong said.

However, Mr Wong also highlighted the positive side of talent mobility within the industry. "It isn't necessarily a bad thing for bright minds to leave and start their own businesses or join other companies. This mobility can spur the growth, encourage the free flow of knowledge, and amplify the real-world impact of technologies developed by ASTRI, such as through patents," he added.

重置辦公室 讓員工溝通更緊密

曾為跨國公司管理層多年及具豐富公職經驗的王明鑫，於2013至2019年出任應科院主席，他任內其中一項重大舉措，是把分散在科學園區不同位置的辦公室整合，歸納在同一幢樓宇內，讓員工溝通更緊密、提升工作效率、節省營運開支。

他解釋：「以往開會同事要花10多分鐘走到另一端開會、同事間的文件往來也甚費時失事。」

整合辦公室不僅提高了後勤效率，還有利建立緊密合作的團隊，這是留着人才的關鍵。香港向來十分渴求創科人才，王明鑫坦言任內最大挑戰是維持團隊的穩定性。「這需要良好的團隊合作，把大家的工作位置拉近對此很有幫助。」

話雖如此，他亦表示，人才流動對科技生態系統的發展有積極影響。「讓人才離開組織創業或加入其他公司，並一定是壞事，因為這可以促進整個行業的發展和知識傳播，更可以讓應科院研發的技術透過專利等方式落地應用、發揚光大。」



TECHNOLOGICAL INTEGRATION AND TALENT CULTIVATION ARE CRUCIAL TO HONG KONG'S I&T FUTURE

科技融合與人才培育對香港創科的
未來發展至關重要

EMBRACING
NEW TECHNOLOGIES
擁抱新興科技

Reshaping Research for the Future

Another key initiative led by Mr Wong was the restructuring of ASTRI's research framework. He emphasised the growing need for interdisciplinary collaboration in modern technology. "Research institutions must break away from the traditional product-oriented model and instead adopt greater flexibility in team structures. This was how ASTRI prepared itself for the road ahead."

Technology fields are becoming increasingly intertwined, he said. For instance, medicine now integrates electronics, imaging, and security technologies. To keep pace with such advancements, ASTRI adapted its approach, ensuring its teams were ready to tackle challenges requiring cross-disciplinary expertise.

People at the Heart of Technological Success

Under Wong's leadership, ASTRI made significant strides in various areas of technology. One notable milestone was the release of Hong Kong's first white paper on blockchain technology. He also highlighted ASTRI's contributions to the FinTech sector.

"We worked closely with the Hong Kong Monetary Authority and the Hong Kong Association of Banks to establish a comprehensive talent training system. We also collaborated with universities, which introduced relevant courses to nurture FinTech professionals, laying a solid foundation for the industry's future development," said Mr Wong.

He believes that technological integration and talent cultivation are crucial to Hong Kong's I&T future. "Advancements today no longer occur in isolated fields. Cross-disciplinary integration is growing common. For example, electronic technologies are now integral to healthcare; security systems are essential for telemedicine; and artificial intelligence (AI) and data analytics have become more indispensable for modern medical diagnostics. These trends underscore the importance of communication and collaboration across sectors."

重整架構 應對未來需要

他任內另一大「手術」，是重整應科院的科研架構。他解釋，現代科技需要更多跨學科合作，不同領域的技術正在融合發展。「科研機構應該打破傳統的產品導向模式，採用更靈活的團隊結構，為應科院走更遠的路作好準備。」

他舉例說，不同科技領域相互影響發展，醫學科技融入了電子、影像、安全技術。為了應對創科發展的需要，應科院有必要作出調整，確保團隊具備跨學科專業知識。

「人」是科技成功的核心

在王明鑫領導下，應科院在多個領域取得突破性進展，包括推出香港首份區塊鏈白皮書。「特別值得一提的是應科院在金融科技（FinTech）領域的貢獻。通過與香港金融管理局、銀行公會的合作，建立了完善的人才培訓體系。同時推動大學開設相關課程，為香港培育金融科技人才，為行業發展奠定基礎。」

對於香港創科的未來發展，王明鑫特別強調科技融合與人才培育的重要性。他指出，現今科技已經不再是單一領域的發展，而是呈現出跨界融合的趨勢。「例如電子技術可應用於醫療領域，安全技術對遠程醫療不可或缺，人工智能和數據存儲技術更是現代醫療診斷的關鍵支柱。這突顯了人與人之間溝通與合作的重要性。」

Mr Wong also sees universities and ASTRI as complementary forces in nurturing talent. While universities focus on foundational research and education, ASTRI plays a pivotal role in bridging the gap between research and real-world applications. "To encourage innovation, ASTRI actively participates in international competitions and exhibitions. This recognises and motivates researchers while fostering collaborations among research, academic, and industrial sectors. Such efforts serve as a springboard for transformative technology applications," he said.

Looking ahead, he remains confident that by building a robust ecosystem, Hong Kong can secure a leading role in global I&T development.

Expanding Greater Bay Area Opportunities

ASTRI Science and Technology Research (Shenzhen) Co., Ltd. was established in 2008, during Wong's time as an ASTRI board member. He sees immense potential for collaboration in technological innovation between Hong Kong and the Mainland China, particularly within the rapidly developing Greater Bay Area (GBA).

"The GBA offers unparalleled opportunities, attracting major corporations and fostering innovation. Hong Kong can leverage its strengths by improving transport and connectivity, promoting tripartite collaboration among the research, academic and industrial sectors, and advancing FinTech and other initiatives. These efforts will enable Hong Kong to stand out within the GBA's technology ecosystem and become a driving force in regional innovation, Mr Wong explained."

A Vision for the Future

Mr Wong's contributions to Hong Kong's I&T sector have cemented his reputation as a visionary leader. From restructuring ASTRI's operations to fostering talent and promoting cross-disciplinary innovation, his efforts have laid the groundwork for a thriving tech ecosystem. By continuing to harness collaboration and expand into new opportunities, Hong Kong is well-positioned to secure its place as a global leader in innovation and technology.

在人才培育方面，王明鑫強調應科院與大學擔當互補角色。大學主要負責基礎研究和人才培養，而應科院則扮演著把技術落地的重要橋樑。「在鼓勵創新方面，應科院積極參與國際比賽和展覽，讓研發人員獲得認可和動力。其次，是建立產學研合作平台，促進技術轉化。」他說，通過建立良好的創新生態系統，香港定能在全球創科發展中佔據重要地位。

擴展大灣區機遇

在王明鑫擔任應科院董事期間，應科院科技研究（深圳）有限公司在2008年成立了。他認為，香港與內地在科技創新領域有巨大合作潛力，特別是大灣區全速發展，吸引不少大企業進駐，蘊藏大量機遇。

「透過加強交通連接、促進產學研合作，以及發展金融科技等方面，香港可以充分利用其優勢，在大灣區科技生態系統中扮演重要角色，推動科技創新和項目發展。」

未來願景

王明鑫對香港創新科技產業的貢獻，奠定了他作為具遠見領袖的地位。從重組香港應用科技研究院的架構到培育人才及促進跨學科創新，他的努力為蓬勃發展的科技生態系統建立了穩固的基礎。香港已做好充分準備，繼續發揮協作力量開拓新機遇，確保自身在全球創新科技領域的領導地位。

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The Architect of Hong Kong's Wireless Future 驅動香港無線通訊科技發展



Dr Justin Chuang
莊哲義博士

Retired Vice Director of Communications Technologies, ASTRI
應科院榮休通訊技術副總裁

Dr Justin Chuang has been a key figure in shaping Hong Kong's wireless communications landscape since joining ASTRI in 2011. Under his leadership, ASTRI has made significant contributions to the city's advancements in the field, leaving an indelible mark on its technological evolution.

After earning a Bachelor's degree in Electrical Engineering from National Taiwan University, Justin embarked on an illustrious career with industry titans such as Broadcom, AT&T, Bellcore, and GE. His expertise spans decades and continents, but it was his tenure as a professor at the Hong Kong University of Science and Technology from 1993 to 1996 that cemented his bond with Hong Kong and ignited his passion for wireless innovation.

"Hong Kong embraces innovation, exhibiting a willingness to explore diverse wireless communications systems," Justin noted. He sees Hong Kong's complex environment as an ideal testing ground for new communications technologies, "If it works here, it'll work anywhere," he added.



莊哲義博士於2011年加入應科院，帶領團隊專研通訊技術，為香港無通訊科技發展進程作出寶貴貢獻。

應科院通訊技術副總裁莊哲義博士在台灣大學電機系學士畢業後赴美深造，並在多家跨國企業包括半導體解決方案公司Broadcom(博通)、電訊服務公司AT&T、Bellcore以及通用電氣公司(GE)等公司工作，專注研發無線通訊技術，累積豐富的科研成果商品化經驗。

他在1993至1996年於香港科技大學電機及電子工程系任教時，充份體驗到香港的科研活力，播下再次來港工作的種子。

「香港對研究很有包容性，願意嘗試各種無線通訊系統。」他又認為，對科研人員來說，香港是測試和實施新通訊技術的理想場所，「因為其環境複雜且具有挑戰性，如果技術能在香港成功，在任何地方都能成功。」

Beyond the Gigahertz: The Future of Connectivity

Justin believes the evolution of communications technology is moving beyond the race for faster speeds. "From 2G to 6G, the focus has shifted to real-world applications, such as new industrialisation, CV2X and autonomous driving," he explained. "The future lies in integrating technology into practical applications to create real value."

He highlighted the crucial role of Cellular Vehicle-to-Everything (CV2X) technology and communications systems in autonomous driving and traffic management. This involves using cellular base station systems, roadside units, and onboard units for vehicle communications and positioning. "Integrating communications and sensing technologies is crucial for future 6G development. This convergence will impact areas such as low-altitude economy and 3D spatial management."

Another transformative trend, according to Justin, is the integration of AI into communications systems. "For instance, pre-trained models, similar to large language models, can be used in vehicle networks to predict traffic conditions and potential hazards," he said.

Hong Kong as a Global Tech Connector

Justin sees Hong Kong as uniquely positioned to become a global technology hub, benefitting from Mainland China's talent and resources while maintaining strong connections with international markets. He cited ASTRI's role in developing an LTE system for the Wuhan Metro as a prime example of successful technology transfer.

He also reflected on ASTRI's collaboration with a Beijing-based company Innofidel, which resulted in the world's first 4G chip showcased at the 2010 Shanghai World Expo. "Even before I join ASTRI, I was aware of their exceptional work," Justin said. "While others were still developing prototypes, ASTRI had a functional product—a global first."

The AI and Quantum Leap

Justin's decades of contributions to the technology sector earned him a Fellowship at the Hong Kong Academy of Engineering Sciences in 2023. With his wealth of experience, he is uniquely positioned to identify the next wave of breakthroughs. Among these, he sees AI and quantum computing as the transformative forces for the communications industry.

"Integrating AI with communications systems opens up new research dimensions," he explained. "Semantic communications, for example, utilises AI to understand and transmit semantic information, moving beyond traditional binary data."

Justin also emphasised the significance of quantum-secured encryption, which, alongside semantic communications, exemplifies the convergence of emerging technologies. "These advancements not only drive innovation in communications theory but also pave the way for the design of future communications systems," he concluded.

先進通訊科技不可或缺

回顧通訊技術的發展歷程，莊博士說，已從單純追求速度轉向更廣泛的應用。「從2G到6G，重點逐漸轉向實際場景應用，如新型工業化、車聯網和自動駕駛等。未來的差異化將在於如何把技術應用到實際場景中，創造真正的價值。」

莊博士強調，車聯網和通訊系統在自動駕駛和交通管理中發揮關鍵作用，包括使用蜂窩基站系統、路側單元和車載單元來實現車輛間的通訊和定位。「把通訊技術和感知結合在一起，可以用於低空經濟和三維空間管理，對未來的6G技術發展至關重要。另一趨勢是把人工智能融入通訊系統，包括在車聯網中使用類似大語言模型的預訓練模型來預測交通情況和潛在危險。」

香港具優勢輸出新科技

香港在科技創新方面具有獨特優勢，背靠中國內地的人才和資源，同時面向全球市場，是連接內地與世界的重要橋樑。他舉例說，應科院與早年已分拆的公司合作為武漢地鐵開發LTE系統，實現了可靠的專網通訊。

應科院早年與北京一家公司「創毅視訊」合作，在2010年上海世博展出內地4G標準的芯片。「那時候我仍未加入應科院，但已聽聞團隊很厲害，當其他人都還在做prototype（原型樣板），應科院已有實物展出，是全球第一個真正把它做出來。」

聚焦人工智能量子計算

憑着豐富的科技經驗和對業界的貢獻，莊博士於2023年榮膺香港工程科學院院士。他預期隨着AI和量子計算等新技術的發展，將為通訊技術帶來新機遇。「把現有技術如AI與通訊技術結合，可以開拓新的研究維度。例如語義通訊利用AI技術來理解和傳輸語義訊息，而不僅僅是傳統的二進制數據。」

他總結說，語義通訊和量子安全加密等新領域正在開拓，顯示了技術融合的重要性。這些發展不僅推動了通訊理論的創新，也為未來的通訊系統設計帶來了新的可能性。

ASTRI's Transformation: Insights from Veteran Leaders

資深領導分享應科院轉型之路

As a key driver of Hong Kong's I&T ecosystem, ASTRI has nurtured a wealth of R&D talents while achieving world-class breakthroughs in multiple technology domains. Looking ahead, ASTRI aims not only to maintain its leadership in technology, but also to inspire a broader appreciation for scientific research and attract more outstanding talent to the growing I&T community.

Freedom in the workspace: The Crucial Catalyst for Innovation

Celebrating its 25th anniversary, ASTRI proudly reflects on its legacy while looking to the future. Two of its veteran leaders, Dr Alan Cheung, Chief Director of the Artificial Intelligence and Trust Technologies, and Dr Chen Jung Tsai, Chief Director of the IoT Sensing and AI Technologies, are also marking two decades with ASTRI. Having witnessed ASTRI's evolution up close, their insights offer a unique perspective on its journey.

Both Alan and CJ brought with them international experience before joining ASTRI. Alan worked in integrated circuit (IC) design in Silicon Valley, USA, while CJ contributed to Taiwan's semi-conductor industry. These experiences, they note, were instrumental in shaping their contributions at ASTRI.

Alan attributed his long tenure at ASTRI to the organisation's culture of freedom and opportunity, "ASTRI provides us with ample room to innovate. If we have a great idea, we are encouraged to explore its feasibility. Moreover, we engage with stakeholders from diverse sectors, including universities, government bodies and enterprises, which significantly broadens our horizons. Facing constant challenges at work drives our professional growth," he said.



Dr Alan Cheung
張偉倫博士

Pioneering FinTech Innovation

Alan's early work at ASTRI focused on IC design. Later, with the rise of cryptocurrency, his focus gradually shifted to emerging fields such as blockchain, FinTech, and artificial intelligence (AI).

One of his proudest accomplishments is ASTRI's early adoption of blockchain research in Hong Kong.



Dr Chen Jung Tsai
蔡振榮博士

應科院作為香港創新科技的重要推動者，不僅培育了眾多研發人才，也在多個領域中取得世界級的成就。未來，應科院冀繼續保持技術領先地位，提高公眾對科研的認識，並吸引更多優秀人才加入這個創科大家庭，傳承創科精神。

工作自由度大利研發

在應科院慶祝成立25年之際，人工智能及可信技術首席總監張偉倫博士(Alan)和應科院物聯網感測與人工智能技術首席總監蔡振榮博士(CJ)剛好加入應科院20年，屬其中最資深的科研團隊領袖，見證着應科院的重要變遷。

在加入應科院前，他倆都有在海外工作的經驗。Alan在美國矽谷從事集成電路(IC)設計，而CJ則為台灣半導體公司服務。「這些經驗對後來在應科院的工作有莫大幫助。」

Alan指出，工作自由度和接觸面廣是吸引他留下來發展的主要原因：「應科院讓我們有很大自由度去進行創新，只要有好的想法就可以探索可行性。我們又能接觸不同圈子、不同類型的客戶，包括大學、政府部門和企業等，擴闊了視野。在工作中不斷面對新的挑戰和改變，讓我們持續成長。」

"During the cryptocurrency trading boom, few people considered the underlying technology. ASTRI was among the first organisations in Hong Kong to explore blockchain. Initially, we researched how to enhance mining hardware efficiency through chip technology. Later, we collaborated with the Hong Kong Monetary Authority on a white paper about blockchain applications in the banking sector. This project opened new markets for us, enabling the adoption of technologies like crypto assets, cybersecurity and AI in traditional industries such as finance," Alan explained.

Evolving Research Focus: From Components to Solutions

Alan highlighted how ASTRI has evolved over the years: "We've transitioned from focusing on behind-the-scene R&D for product components to developing application-level solutions for various industries. This shift reflects advancements in innovative technologies and their integration across sectors. The latest advancements in Generative AI hold immense potential for growth. Our team is at the forefront of developing innovative solutions designed to empower businesses and public organisations, enhancing their efficiency and driving competitiveness."

Through close collaboration with diverse clients, Alan's team has gained valuable insights into the industry challenges, or pain points, and tailored technological solutions to address them.

"One of ASTRI's missions is to serve the local industries with technologies. Helping them solve problems give us a genuine sense of achievement."

Nurturing Talent and Driving Innovation

ASTRI's contributions extend beyond technology to nurturing I&T talent. CJ recalled how many researchers spun off from ASTRI to establish new companies, often securing venture capital after achieving success in developing technologies.

"ASTRI has always given researchers the freedom to pursue greater opportunities. While they grow, ASTRI benefits financially and strengthens Hong Kong's R&D ecosystem," CJ noted.

He recounted a particularly memorable success story: "One researcher took a non-mainstream approach to developing technology. At the time, we thought the changes of success were slim, but he proved us wrong. After founding a new company, he developed the world's first vibration-resistant smartphone camera, which revolutionised the industry. Today, the company is worth hundreds of millions"

Inspiring the Next Generation

To secure the future of I&T in Hong Kong, Alan emphasises the importance of attracting young talent to R&D. CJ, meanwhile, advocates for optimising the R&D environment through more patience, support, and flexible funding policies, enabling researchers to work with confidence and focus.

Looking ahead, both Alan and CJ hope that ASTRI will continue to lead in innovation, deepen public understanding of scientific research, and drive the development of pioneering technologies.

引領金融科技新發展

Alan初期出任首席工程師，專注研發IC設計，後來隨着加密貨幣興起，逐漸轉向區塊鏈、金融科技、人工智能等新興技術領域。

應科院是全港最先進行區塊鏈相關項目的機構之一，令Alan引以為傲。「當時全城熱『炒』，但沒有太多人關心當中涉及的技術。我們當初研究如用善用芯片科技，令所謂的『掘礦機』更有效益。後來，則與香港金融管理局合作發表《白皮書》，研究區塊鏈在銀行業的應用。這個轉捩點可以說為應科院開拓了新市場，把更多不同類型的科技如加密資產、網絡安全、人工智能在金融等傳統產業落地應用。」

應科院研究方向變化

Alan續說，這其實也反映了應科院的蛻變，從「幕後」走到「台前」。「以前我們較專注研發產品內的部件(component)。隨着各種嶄新科技融合發展，為各行各業提供解決方案，我們的技術研發也轉為聚焦『應用』層面，現在生成式人工智能(Generative AI)技術有很大的發展空間，我們團隊正為各企業及公共機構開發創新方案以提升其效率及競爭力。」

通過接觸各類型客戶，Alan和團隊更了解不同行業「痛點」，繼而研發度身訂造合適的技術方案。「應科院其中一個使命是藉科技服務香港產業，能夠為他們解決問題，我們都有一定的成功感。」

為業界培育創新人才

應科院在過去多年取得了許多成就，其中之一是培育創新科技人才。CJ憶述當年很多優秀的研發人員在成到開發技術後，會分拆成立新公司，吸引創投注資，應科院給予他們空間尋求更大的發展機會，這樣做同時能為應科院帶來可觀收入及擴大香港的科研生態圈。

「我印象最深刻的是其中一位研究員的技術發展方向，與坊間絕大部份研究背道而馳，我們認為成功機會不大，但他最終成功了。成立新公司後，更研發了全球首個具防震功能的手機相機，撼動業界，公司市值以億元計。」

傳承創科培育新一代

對於香港創科的未來發展，Alan認為要吸引更多年輕人進入科研領域；CJ則指在科技成果轉移方面做得更好，同時，需要更多耐心和支持來完善研發環境，以及更靈活的資金政策來支持創新，讓研發人員更安心、更落力工作。

展望未來，他倆冀應科院能夠繼續在不同類型的創新中保持領導地位，提高公眾對科研的認識，並開發更多世界領先的技術。

From Drifter to Driver: A Hong Kong Pioneer in Vehicle Connectivity

「港漂」10多年 創「車聯網」科技

Mr Dongzhe Su, Director of Smart Mobility at ASTRI, is a driving force behind Hong Kong's emerging role in the innovative world of vehicle connectivity. After graduating from the Hong Kong University of Science and Technology with a Master's degree in Computer Science, Mr Su co-founded a startup before joining ASTRI in 2013. Initially focused on communications technology, under management's guidance, he quickly pivoted to the then-untapped potential of smart mobility, particularly vehicle connectivity—a bold move in a city where few dared to venture into this nascent field.

Having lived in Hong Kong for years, Mr Su enjoyed a “three-star” identity, holding permanent residency in the city. He previously resided in Ma On Shan, commuting to work by bicycle. During the pandemic, he returned to Shenzhen to be with his family. Thanks to the improved infrastructure at the Lok Ma Chau Loop, now he can cross the border easily every day. “I feel comfortable working in Hong Kong,” he says, “ASTRI offers a great work environment with a high degree of research freedom. I can also maintain a healthy work-life balance.”

In 2015, Mr Su spearheaded a groundbreaking project to develop vehicle connectivity technologies from scratch. Overcoming regulatory challenges and fostering collaborations with both public and private sectors, he and his team are set to celebrate a decade of innovation in 2025 with ASTRI's public trials planned at Hong Kong Science Park, Kowloon East, and the Lok Ma Chau Loop.

Connected Smart Vehicles – A New Era Dawns

Mr Su explained that there are two primary types of autonomous driving technologies: “single-vehicle intelligence,” which relies on the car's internal systems, and vehicle-to-everything (V2X) communication, which depends on roadside infrastructure. These technologies complement one another, improving safety and efficiency in autonomous driving. “In Hong Kong's congested and complex environment, the collaborative effect of vehicle connectivity is crucial,” he explained. “It facilitates communications between autonomous vehicles, reducing accident rates, improving traffic flow, shortening travel times, and enhancing the overall user experience.”

Looking ahead, Mr Su is optimistic about the future of connected autonomous driving. With Europe and the United States targeting 80% vehicle connectivity by 2035, the trajectory is clear. “Previously, the greatest challenge was the lack of communication capabilities in most vehicles. Now, many smart vehicles are equipped with connectivity features. While deploying roadside infrastructure requires significant investment, technological advancements have made it feasible. Installing connectivity equipment at key locations like intersections and roundabouts can dramatically improve safety and traffic management.”



Mr Dongzhe Su
蘇棟哲

Director of Smart Mobility, ASTRI
應科院智慧出行總監

應科院智慧出行總監蘇棟哲在香港科技大學讀計算機科學，碩士畢業後與友人創業，2013年加入應科院，初時研究通訊技術，後專注研發當時「香港沒有人在做」的智慧出行科技，特別是車聯網，在管理層的指導下開創業界潮流。

留港多年，他早已取得「三粒星」（香港身份證），曾住馬鞍山，每天騎單車上班；在疫情期間，他搬回深圳與家人同住，現時每天深港兩邊跑，享受河套區「一號通道」帶來的便利。「我在香港感覺挺自在；應科院的工作氛圍很好，科研自由度高，我也可以平衡工作和生活。」

2015年，他與團隊「從零開始」研發車聯網，與不同合作夥伴和政府部門溝通斡旋，跨越重重挑戰。2025年，「親兒」10歲了，應科院計劃在科學園、東九龍以及深港河套區等地方進行車聯網或網聯自動駕駛進階測試。



Autonomous Driving: Poised for Explosive Growth

Despite the promise of connected autonomous driving, progress has been slower than initially anticipated. Mr Su attributed this to global economic slowdowns, complex traffic regulations, and low market penetration. However, he emphasised ASTRI's critical role in bridging the gap between theoretical research and practical application. “Our strength lies in transforming theory into reality,” he said. “Once we meet the necessary safety and reliability standards, widespread adoption will follow.”

He likened the future of connected autonomous driving to the transformative shift from horse-drawn carriages to steam engines. “When the technology matures, the industry will experience explosive growth,” he predicts.

Seamless Cross-Border Connectivity in the Greater Bay Area

Another key focus for ASTRI is cross-border connectivity, particularly within the Greater Bay Area. Mr Su and his team, supported by the governments of Shenzhen and Hong Kong, are addressing challenges such as differing traffic conventions (left-hand vs right-hand driving), signals, regulations and navigation systems.

“The key challenge is achieving seamless connectivity,” he explained. “For instance, providing stable network services to prevent signals disruptions during border crossings is critical for autonomous vehicle operations. Additionally, transitioning from Beidou navigation system used in Mainland China to Google Maps, which is commonly-used in Hong Kong, poses significant technical hurdles.”

Taking Flight: The Promise of the Low-Altitude Economy

Beyond ground transportation, Mr Su saw significant potential in the low-altitude economy. ASTRI has been collaborating with The Hong Kong Polytechnic University on “integrated sensing,” a 3D perception technology initially developed for vehicle connectivity, but with broader implications.

“ASTRI's integrated sensing technology will be a game-changer,” he said. “The regulatory landscape for aerial operations is less complex than that for ground transport, paving the way for substantial commercial opportunities. We anticipate rapid growth in the low-altitude economy.”

Mr Su highlighted Hong Kong's unique advantages in theoretical research and talent, as well as its urban landscape, which creates distinctive application scenarios. “It is my greatest hope that the Greater Bay Area can achieve industry chain integration by developing cutting-edge technologies in Hong Kong while manufacturing them in Mainland China,” he concluded.

網聯智能車成新趨勢

蘇棟哲指出，現時普遍有兩種自動駕駛技術，分別是建於車內的「單車智能」以及靠路側設備與車輛溝通的車聯網，兩者互相配合相輔相成，令自動駕駛更安全。「在香港這麼擁堵複雜的場景下，車聯網的協同作用變得非常重要，有助無人車之間的交互溝通，從而減低安全事故率、提升交通效率、縮短出行時間和提升體驗。」

他非常看好網聯自動駕駛的前景，指歐美和日本都訂了目標，在2035年前，八成車輛將具備網聯功能。「以前最大的瓶頸是大部份的車沒有和路側溝通的能力，新的趨勢是很多智能車已逐步具備網聯功能。其次是路側設備需投入不少資金，但隨著技術提升，在平衡成本考慮後，我們認為可調節道上的路側設備，只要在十字路口和迴旋處加裝，便足以讓無人車安全行走。」

爆發式增長指日可待

回顧過去十年網聯自動駕駛的發展，蘇棟哲坦言沒有預期中快，並指全球經濟不景氣、地面交通規則眾多、自動車滲透率低都是主要原因。「正因如此，應科院的角色更為重要，業界較缺乏從理論到論證、繼而實踐，這正是我們團隊的強項。當安全和可靠度達標，便能大規模落地應用。」他形容邁向網聯自動駕駛的過程，有如百多年前蒸氣車取代馬車一樣，產業化後就會「大爆發」式增長。

促進大灣區互聯互通

跨境網聯是應科院另一核心研究領域。內地與香港制度不同，一個左軚右行、一個右軚左行，道路標示、交通規則全不一樣。2022年，在深圳市政府和香港特區政府支持下，應科院啟動了大灣區互聯互通路線圖，從通訊技術、導航地圖系統等探索跨境智能網聯的實際操作。

「重中之重是如何做到無縫連接，例如提供穩定網絡服務，不會在跨境時突然消息訊號，影響自動車操作；其次，如何從內地的北斗導航系統瞬間跳到香港普遍使用的谷歌地圖？這些都是很重要的課題。」

冀全速發展低空經濟

蘇棟哲說，兩年多前和香港理工大學合作開展研究，把應用在車聯網的技術發展成三維空間的感知技術，即「通感一體化」，有助發展低空經濟。「我相信應科院將會是首批在香港落地應用通感一體化技術的科研機構。空中的法規和地面相比較為簡單，從商業化盈利的層面來說，有更大的發展機遇。我們期待低空經濟將迎來跨越式的發展速度。」

他認為，香港在理論研究和人才方面具備優勢，而滿佈高樓大廈的複雜應用場景也非常獨特。「我期望大灣區能夠在這方面做到產業鏈融合，在香港開發領先技術，然後在內地生產製造。」

Hong Kong's Tech Titans: Women Leading the Innovation Charge 女性科研專才創新路上不斷突破



Dr Tao Yu
余濤博士

Dr Helen Li
李濤博士

Dr Yolanda Tsang
曾佑佑博士

In Hong Kong's booming tech sector, talent transcends age, gender, and background. At the forefront of this transformation is ASTRI where female researchers are not only breaking barriers but also earning international acclaim for their groundbreaking contributions.

Dr Yolanda Tsang, Director of Communications Technologies at ASTRI, is a trailblazer in the wireless communications field. With a PhD in Electrical and Computer Engineering from the United States and experience at a Motorola spin-off, she returned to Hong Kong to make her mark.

"I've witnessed the evolution of the industry firsthand, from 2G to 5G," she recalled. "Back in the 2G days, with GSM and CDMA, many doubted the need for 3G, believing voice calls were sufficient. The iPhone changed everything."

When asked about the current hype surrounding 5G, Yolanda offered a seasoned perspective: "What's being marketed as 5G is largely pre-5G or 4.5G—a transition phase. True 5G has not been fully realised because there is not yet a truly lucrative business model to support it."



在求才若渴的創科界別，任何年齡、性別、種族的人才，只要具備天賦及資歷，均可發揮所長。應科院的女性科研人員，更是巾幗更不讓鬚眉，在不少科研領域取得突破，接連贏得國際獎項。

應科院通訊技術總監曾佑佑博士(Yolanda)擁有電機與計算機工程博士學位，在無線通訊領域擁有豐富經驗。她在美國完成博士學位後，曾在著名電訊裝置製造商Motorola的分拆公司工作五年，專注於電訊領域。後來，為了因為家庭原因，回流香港工作。

「我從2G、3G一路走來，見證了整個行業的發展。」她回憶道：「當年還在做GSM和CDMA這些2G技術時，很多人都說不需要3G，認為單純打電話就夠了。但iPhone的出現徹底改變了這一切。」

談到目前備受關注的5G技術，作為通訊技術專家的Yolanda表示：「目前市場上所謂的5G，其實是Pre-5G或4.5G，是從4G過渡到5G的階段。真正的5G技術還未完全實現，主要是因為缺乏能夠產生收益的商業模式。」

Revolutionising Communications Technologies

Yolanda highlighted ASTRI's pivotal role in the development of 4G and 5G technologies. "We have achieved significant technological breakthroughs, setting performance records in testing. While some technologies are not yet widely adopted, they have gained considerable recognition within the industry."

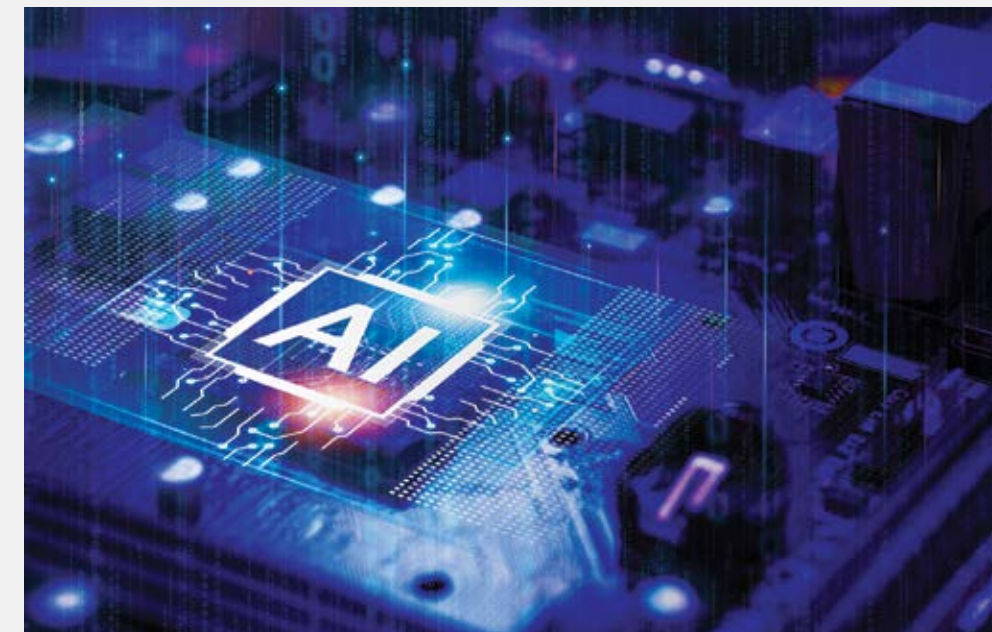
ASTRI is also Hong Kong's sole representative in the influential telecommunication standardisation body, the 3GPP (3rd Generation Partnership Project), a distinction that underscores its global standing.

She credited ASTRI's merit-based culture for fostering innovation. "Promotions are merit-based," she said, "and the benefits package is comprehensive, particularly the insurance coverage." For Yolanda, ASTRI represents more than just contract research; it's about advancing genuine R&D that drives Hong Kong's technological progress.

From Communications Technologies to AI

Dr Tao Yu, Chief Technologist of AI and Trust Technologies at ASTRI, has witnessed the tech world evolve from the early days of 2.5G to the era of generative AI. A graduate of Beijing University of Posts and Telecommunications, she transitioned from communications research to computer science during her doctoral studies in the United States. Her career includes extensive R&D stints at HP and IBM research labs in Beijing, before a unique opportunity brought her to Hong Kong, where she joined ASTRI and began leading a team focused on AI and data analytics.

"Technology advances at breakneck speed," she remarked. "From big data analytics to natural language processing and generative AI, breakthroughs happen every few months." As an applied research institute, ASTRI must strike a balance between pioneering research and practical application, which she believes presents both unique challenges and opportunities.



通訊技術改變溝通模式

她說，應科院在香港4G、5G的發展中扮演著重要角色。「我們做出了很多領先的技術突破，在性能測試方面創下多項紀錄。雖然有些技術還未能廣泛應用，但在業界已建立了相當知名度。」Yolanda強調，應科院是香港唯一一個在全球重要的「第三代合作夥伴計劃」(3GPP)通訊標準組織中擁有代表席位的機構。

對於工作環境，她特別讚賞機構的包容性文化：「這裏晉升機會是根據能力來決定，而且福利制度相當完善，特別是保險計劃等方面都做得不錯。」她說：「最令我感到自豪的是，我們不只是在做外包工作，而是在進行真正的研發。雖然我們的成果不一定是實體商品，但對推動香港科研發展作出了重要貢獻。」

從通訊技術到人工智能

應科院人工智能及可信技術首席技術專家余濤博士的職業生涯橫跨通訊、計算機科學到人工智能等領域，見證了科技發展的跨時代變遷。求學時期，她就讀於中國通訊行業的最高學府—北京郵電大學，專攻CDMA等2.5G通訊技術。其後負笈美國攻讀博士學位，將研究重心從電訊網絡轉向純計算機科學。畢業後她選擇回到北京，先後任職於HP和IBM研究實驗室，累積了豐富的研發經驗。她來港後加入應科院，領導團隊專注研發人工智能科技及數據分析。

「科技發展的速度實在太快了」她感嘆道：「從大數據分析、自然語言處理到生成式AI，每隔幾個月就有重大突破。」作為應用研究機構，應科院需要在前沿研究與實際應用之間取得平衡，這帶來了獨特的挑戰與機遇。



Act Today, Plan for Tomorrow, Envision the Day After

One of Tao's standout achievements is her team's development of a ChatDoc for information query in a vertical domain, which pioneered the adoption of the Retrieval-Augmented Generation (RAG) framework even before it gained widespread popularity. This innovative solution has drawn interest from government departments, and is the first-of-its-kind deployed in Hong Kong.

She praised the drive and precision women often bring to the high-tech field. "Passion for continuous learning is essential in this rapidly evolving industry," she said, adding that women's unique ability to foster strong team cohesion is a powerful asset.

Her perspective is forward-looking: "We must focus on today's challenges, anticipate tomorrow's needs, and envision the future." With ongoing exploration of AI and other emerging technologies, her team is set to make a lasting impact on Hong Kong's tech landscape.

做今天、看明天、想後天

在談到目前最具突破性的項目時，她提到了ChatDoc的開發。「我們在檢索增強生成(RAG)框架還未得到廣泛採用前就完成了首輪示範，走在業界的前列。」這個項目獲得了多個政府部門青睞，成為全港首個落地應用的同類系統。

作為女性從業者，她認為這個行業雖然男性居多，但選擇這一領域的女性往往具備強烈的自我驅動力。「如果沒有持續學習的熱情，在這個快速發展的行業是很難堅持的。」她指出，女性注重細節和關懷團隊方面的優勢，帶來了獨特的價值。

她強調技術創新永無止境。「我們要做今天的、看明天的、想後天的。」在她的帶領下，團隊將繼續在人工智能等新興領域探索創新，為香港的科技發展貢獻力量。

Women's Research Abilities on Par with Men's

Dr Helen Li, a Chief Engineer at ASTRI, emphasises the human-centric nature of technology and the invaluable contributions of women. "Women's resilience and adaptability, often honed through balancing work and family, translate into exceptional problem-solving skills in research," she explained.

Women often pay close attention to other's opinions and feedback, while demonstrating greater sensitivity to other's emotions and needs, she said. Helen also highlighted the importance of listening skills in fostering collaboration and inclusivity, helping to make decision more comprehensively. "Women's empathy also fosters stronger communications and understanding within teams, unwinding troubles more effectively."

Leading in AI Chip Design

She earned a bachelor's degree from Peking University and a doctoral degree from the Hong Kong University of Science and Technology. Currently focused on AI chip design, Helen's team is tackling one of the most competitive fields in tech. "With tech giants battling for market share, we're focusing on on-device applications," she said. "The fragmented nature of these applications makes custom solutions essential, and this is where we excel."

AI chip design, she explained, requires more than just hardware expertise. Her team dissects, optimises, and even rewrites AI algorithms to ensure high computational efficiency. "We've developed a comprehensive software toolchain, including compilers, quantisers, network optimisers, simulation tools, firmware drivers, and application software," she said. Some of these technologies have already been licensed to industry partners for applications such as smart locks and AI-powered processors.

Looking ahead, she envisions broader application for AI, particularly in vision and speech technologies, paving the way for greater AI integration in everyday life."

Redefining Success in Technology

These women are more than just brilliant minds – they are redefining the tech landscape with their unique perspectives. Their ability to balance competing priorities, foster collaboration, and deliver real-world results is driving innovation not just in Hong Kong, but globally.

They are proving that in the world of technology, diversity is not just desirable; it is essential for success.

女生科研能力不輸男生

應科院總工程師李濤博士(Helen)認為，科技以人為本，女性在科研領域能為更具包容性和人性化的研究環境作出重要貢獻。「女性在平衡工作和家庭責任的過程中培養了韌性和適應性，在科研中面對挑戰和困難時表現出色。」

她指出，女性往往能夠認真關注他人的意見和反饋，理解他人的情感、注重他人的需求。「這種傾聽能力不僅有助於團隊內部的交流，還能在研究過程中收集各種觀點和建議，令決策更為全面。此外，女性的同理心能夠促進團隊成員之間的溝通與理解，從而有效地解決問題。」

人工智能晶元成為新寵

Helen從北京大學及香港科技大學分別取得學士及博士學位，目前主要負責開發人工智能芯片。「這是近年非常熱門的領域，許多科技巨頭爭勝之地。經過廣泛的調研，目前的定位是設備端側的應用，因其應用場景繁多複雜且碎片化，特別適合開發一些定製化的解決方案，這正是我們的強項。」

「要做好人工智能芯片，不只是硬體電路設計，更要拆解、優化甚至是改寫AI演算法。為了能實現高效計算，我們還自行研發AI芯片配套的軟體工具鏈，包括編譯器、量化器、網絡優化器、模擬工具、固件驅動及應用軟體等。這個專案的部分成果已經轉移給業界，用於智慧門鎖和具備AI智能的終端處理器等。未來將結合AI視覺和AI語音，讓人工智能在更廣泛的領域應用。」

重新定義科技成功標準

這些女性不僅才華出眾，更以其獨特的視角重新塑造創新科技業的面貌。她們善於審時度勢理順緩急先後，並有效協調各方合作，成功把科研成果轉化為實際應用，推動香港乃至全球的創新發展。

她們用行動證明多元化不僅值得追求，更是驅動科技成功的關鍵要素。

ASTRI Cultivates Next-Gen Tech Talent for Hong Kong

創新人才招聘計劃 為港培育創科新秀

ASTRI, is not just producing cutting edge research, it is shaping the future of Hong Kong's tech landscape by nurturing the next generation of tech leaders. Through its ambitious initiatives, the “Top Technology Scholar Programme” and the “ASTRI WORK-STUDY Programme (PhD)”, the institute is attracting top-tier talent and injecting fresh energy into the city's innovation ecosystem.

Dr Cary Tang, a recipient of the 2nd “Top Technology Scholar Programme”, joined ASTRI's Intelligent Perception and Control Technologies (IPCT) in August 2023. Armed with a Bachelor's degree in Mechanical Engineering from the Hong Kong University of Science and Technology, and Master's and Doctoral degrees from Imperial College London, Cary specialises in computational mechanics, computational fluid dynamics and mechanical design.

At ASTRI, his research focuses on the development of sensing fusion and edge computation system hardware and thermal management solutions. “This isn't textbook science – it's applied research with practical applications, both indoors and outdoors,” Cary explained.

He highlighted the importance of applying “First Principles” in research: “We're creating unprecedented products, so we must start with fundamental principles, building solutions step-by-step. Interestingly, similar mathematical models underpin seemingly unrelated

fields, showcasing the interconnectedness of basic science.”

From Construction Sites to AI: A Diverse Portfolio

One of Cary's proudest moments was seeing his sensor technology deployed at a live construction site. However, the road has not always been smooth. He has developed valuable skills in client management and on-site collaboration, lessons that are integral to the practical side of innovation.

ASTRI's portfolio is as diverse as it is ambitious, spanning projects from elderly care a public transport to AI applications in racecourses and customs. Cary's work reflects the institute's reach into unexpected sectors, pushing the boundaries of artificial intelligence and its potential.

應科院致力培育新生代科研人員，近年推出「精英科技人才招聘計劃」及「兼讀博士生工作計劃」，成功網羅優秀人才加盟，為應科院注入新活力。

鄧衍昕博士 (Cary) 是「精英科技人才招聘計劃」第二屆學員，於2023年8月加入應科院智能感知與控制技術部。擁有香港科技大學機械工程學士學位，並在英國倫敦帝國學院取得碩士及博士學位的他，專注於計算力學、計算流體力學和機械設計領域。

談及在應科院的工作，Cary表示現時主要負責感測器融合及邊緣系統計算硬件相關設計和散熱系統的研發工作。「這裏進行的是應用研究，涉及的範疇相當廣泛，基於同一核心技術下，從室內到戶外的應用都需要顧及。」他解釋道。

對於科研工作，Cary強調第一原則 (First Principle) 的重要性：「我們開發的都是市場上前所未有的新產品，解決方案往往需要從基本原理出發，循序漸進地發展。有趣的是，不同領域的研究背後可能運用相似的數學模型，這真正體現了基礎科學的共通性。」

業務多元化擴闊視野

最令Cary感到自豪的，是參與智能建築工地的感測器項目。「親眼見證自己設計的硬件和感測器在工地上成功運作，那種成就感難以言喻。」然而，他坦言與工地人員溝通、管理客戶期望都是寶貴的學習經驗。

應科院的研究項目類型多樣化，從安老院舍到馬場設施，從海關監察到港鐵系統，都能看到科研團隊的身影。這種多元化的工作環境，讓Cary能夠將科技應用到不同領域，擴闊視野。

工作雖然充實，但也充滿挑戰。「曾經試過凌晨三點才離開辦公室，第二天早上八點又要到工地安裝設備。」Cary笑言。為配合客戶需求，週末工作、徹夜施工都是家常便飯。不過，位於科學園的辦公環境令人心曠神怡。「我們的辦公室望出去就是壯麗的海景，還有露台可以呼吸新鮮空氣，這樣的工作環境確實令人心情舒暢。」

While the work is rewarding, it is also demanding. “There have been times when I left the office at 3am, and back on a construction site at 8am the next morning,” he admitted with a laugh, adding that weekend work and overnight deployments are part of the job. However, the Science Park environment offers a welcome balance. “The stunning sea views and outdoor spaces around our office make it a truly refreshing place to work.”

Balancing a PhD and a Thriving Career

Dr Rachel Dai's career trajectory is equally inspiring. A graduate of the Hong Kong University of Science and Technology's Electronic Engineering Department, Rachel joined ASTRI in 2017 through campus recruitment.

“I chose ASTRI because its research focus aligned with my academic background, and it offered exceptional career development opportunities,” she explained. Following a successful year-long internship, she transitioned to a full-time role as an engineer, specialising in AI medical technologies such as image processing and deep learning algorithms.

In 2023, Rachel became part of ASTRI's inaugural “ASTRI WORK-STUDY Programme (PhD)”, and began doctoral studies in computer science and technology. “The application process was rigorous, requiring approvals from multiple levels, including my supervisor, technical director and HR,” she said. The programme dedicates one day a week to her PhD coursework, but balancing academic pursuits with a full-time role demands time management and immense self-discipline.

A Key Achievement: AI-assisted Medical Diagnosis

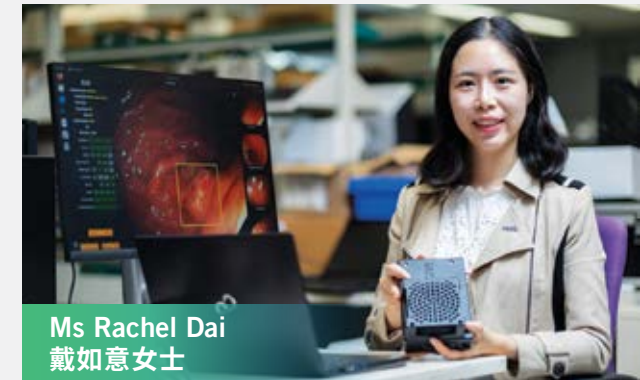
Rachel sees industry-academia collaborations as a cornerstone for innovation. “University research provides cutting-edge technology that directly addresses real-world problems, elevating project quality,” she noted.

One of her most notable accomplishments is a 18-month project to develop a portable AI-assisted medical diagnostic system for gastrointestinal endoscopy. “I was involved in every stage, from system design to onsite testing,” she said. The system has already received positive feedback from doctors during trials in several hospitals in mainland. The project's success is underscored by its accolades – a silver medal at the 2024 Geneva International Invention Exhibition and an award of excellence at the Hong Kong ICT Awards.

Nurturing Hong Kong's Tech Talent

The experiences of Dr Cary Tang and Dr Rachel Dai highlight ASTRI's pivotal role in fostering the next generation of tech leaders. By creating a dynamic environment where innovation thrives and talent flourishes, ASTRI is not only shaping Hong Kong's tech landscape but also positioning the city as a global hub for technological advancement.

Through its commitment to bridging academia and industry, ASTRI is proving that nurturing talent is as important as groundbreaking research – laying the foundation for a vibrant and sustainable future in technology.



Ms Rachel Dai
戴如意女士

兼讀博士學時間管理

年輕研究員戴如意 (Rachel)，分享了她從實習生到專業研究員的職業發展歷程。2017年，剛從香港科技大學電子工程系畢業的她，透過校園招聘活動加入應科院，開始了實習生生涯。「我選擇應科院，主要是因為它作為研究機構的專業性與我的學術背景相符，而且能提供很多職業發展機會。」Rachel表示。在完成一年項目實習後，她轉為正式工程師，現時主要負責AI醫療技術相關項目，包括影像處理、深度學習算法等。

作為應科院首批「兼讀博士生工作計劃」的員工，Rachel於2023年秋季初開始修讀計算機科學專業博士課程。「申請過程具有挑戰性，需要經過主管、技術總監到人力資源部門等多個層級的審批。」「兼讀博士生工作計劃」的員工在保證不影響工作任務下，每週可抽出一天時間上課，Rachel感受到在職進修確實需要極強的時間管理和自我驅動力。

人工智能助醫療分析

她認為，通過產學結合的方式，既推動創新科技發展，也為員工提供持續進修的機會。「從大學我們可以獲得最新的技術，這些技術可以應用在工作中解決問題，提升我們項目的質量。」

談到最近期完成的重要項目，Rachel提到一個為期一年半的便攜式AI醫療診斷系統。「這個用於胃腸道內窺鏡診斷與質控的項目，我參與了從系統設計到實際部署測試的整個過程。在內地數家醫院進行試驗時，獲得醫生們的正面評價。」該項目更在2024年瑞士日內瓦國際發明展贏得了銀獎，並在同年的香港資訊及通訊科技獎獲得智慧生活獎優異獎，令她感到特別有自豪。

致力培育港創科人才

總括而言，他倆都認為應科院不僅為年輕科研人員提供實踐創新科技的平台，更讓他們透過處理不同項目累積寶貴經驗，在事業發展路上茁壯成長。

應科院致力聯繫學術界與產業界，深明培育人才與進行開創性研究同樣重要，為科技領域充滿活力且可持續發展的未來奠定基礎。



CELEBRATIONS AT A GLANCE

樂聚歡慶 成就非凡



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TECH APPLIED SUMMIT

應用科技高峰會



「應用科技高峰會」(高峰會)於2025年2月10日假香港會議展覽中心舉行,以「引領創科 砥礪前行」為主題,邀請了全球40多位「政產學研投」領袖開講,熱議生成式人工智能、低空經濟、智慧城市等創新科技的現狀與未來,吸引接近1,700位科技精英、初創企業、工商界代表和關注創科發展人士參與。

高峰會由應科院主辦,是其踏入銀禧的首個活動。是次高峰會由香港特區政府創新科技署資助,並獲70家機構支持。香港特別行政區行政長官李家超先生應邀發表視像演說,創新科技及工業局局長孫東教授、運輸及物流局局長陳美寶女士等多位政府官員亦親臨現場,分別分享科技合作在推動香港發展和定位為全球创新中心方面的重要性,以及講解低空經濟發展藍圖等最新創科政策。



Tech Applied Summit was held at the Hong Kong Convention and Exhibition Centre on 10 February 2025. With the theme “Leading Tech Forward”, the summit brought together over 40 global leaders from government, industry, academia, research, and investment sectors. Close to 1,700 attendees, including technologists, startups, business leaders, and innovation and technology (I&T) enthusiasts, were engaging in discussions on cutting-edge topics such as generative AI, the low-altitude economy, and smart cities.

The summit was organised by ASTRI as the inaugural event of its silver jubilee year. Funded by the Innovation and Technology Commission, the summit garnered support from 70 organisations.

The event kicked off with a video address by Chief Executive of the Hong Kong Special Administrative Region, The Hon John KC Lee, followed by keynote speeches from senior government officials, including Professor Sun Dong, Secretary for Innovation, Technology and Industry, who shared his insights on the importance of technology and collaboration in driving Hong Kong’s growth and positioning it as a global innovation hub, and Ms Mable Chan, Secretary for Transport and Logistics, who unveiled I&T related policies such as the low-altitude economy development blueprint.



TECH APPLIED SUMMIT
應用科技高峰會

The summit featured prominent speakers from France, Hong Kong, Korea, Mainland China, Thailand, and the UAE. Among them was Professor Dennis Lo, a pioneer in non-invasive prenatal diagnostics and recipient of the Breakthrough Prize in Life Sciences, shared insights on the commercialisation of plasma DNA diagnostic technology for prenatal and cancer screening.

Dr Sunny Chai, Chairman of Hong Kong Science and Technology Parks Corporation; Mr George He, Senior Vice President of Lenovo, and President of Lenovo Capital and Incubator Group, and Mr Hendrick Sin, President of the Internet Professional Association also delivered keynote speeches.

The summit featured a Technovation Zone, spotlighting 20 local technology enterprises, including startups, corporations, universities and research institutions. Participants such as The Hong Kong Polytechnic University, The Hong Kong Research Institute of Textiles and Apparel, and the Nano and Advanced Materials Institute, were showcasing the latest R&D achievements across digital health and smart city solutions.



高峰會演講嘉賓陣容鼎盛，匯聚來自法國、香港、韓國、中國內地、泰國及阿聯酋的政商領袖、科技專家和學者。在「從實驗室到市場－創新商業化的歷程」主題演講上，被譽為「無創產前檢測之父」並榮獲有「科學界奧斯卡」之稱的「科學突破獎－生命科學獎」的香港中文大學校長盧煜明教授，分享他如何把血漿DNA診斷技術應用在產檢，有助及早診斷唐氏綜合症等多種遺傳病；以及用於多種癌症篩查，惠及人類健康。

香港科技園公司主席查毅超博士、聯想集團高級副總裁暨聯想創投集團總裁賀志強先生、香港互聯網專業協會會長冼漢迪先生亦發表主題演講。

此外，現場設有「創新科技展區」，匯聚應科院以及20家本地科技初創、企業、大學及研發機構，包括香港理工大學、香港紡織及成衣研發中心，以及納米及先進材料研發院等，展示最新研發成果，涵蓋數碼健康、智慧城市等多個領域。



SHOWCASING HONG KONG'S TECHNOLOGY PROWESS 展示香港創科實力



Technovation Week was held from 17-21 February 2025 at the Atrium Link of Hong Kong Science Park, highlighting the achievements of 20 local technology enterprises. On display were the latest R&D breakthroughs across artificial intelligent, digital health, new industrialisation and smart city solutions sectors.



「創新科研週」於2025年2月17-21日在香港科學園中庭長廊舉行，匯聚應科院及20家本地科技初創企業、企業、大學與研發機構。會上展示各式最新科研成果，涵蓋人工智能、數碼健康、新型工業化和智慧城市等不同領域。





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Mr Zhong Hai
鍾海先生

Director of General,
Hetao Development Authority
河套深港科技創新合作區深圳園區
發展署署長

On the occasion of the 25th anniversary of the Hong Kong Applied Science and Technology Research Institute (ASTRI), I, on behalf of the Hetao Shenzhen Park Development Authority, extend my warmest congratulations to ASTRI for its remarkable achievements in frontier technology research, scientific innovation, the commercialisation of research outcomes, and the advancement of Shenzhen-Hong Kong collaboration.

In 2024, Hong Kong ASTRI established its wholly-owned subsidiary, Shenzhen ASTRI, in the Hetao Shenzhen Park. As one of the first major technology enterprises and research projects to settle in the Hetao Cooperation Zone, Shenzhen ASTRI is at the forefront of conducting international applied scientific research.

Looking ahead to 2025 and beyond, we hope that ASTRI will continue to align with the strategic planning and vision for the Hetao Cooperation Zone, as outlined by the State Council and the HKSAR Government. We look forward to ASTRI driving innovation in applied science and spearheading pilot-scale transformation, while further advancing Shenzhen-Hong Kong and international technology collaboration. This includes fostering enterprise growth overseas, exploring regulatory innovations, and cultivating talent for the future.

Here's to the continued success and flourishing development of both Hong Kong ASTRI and Shenzhen ASTRI!

在香港應科院成立25周年之際，我謹代表河套深圳園區發展署，向貴院在前沿技術研究、科技研發、成果轉化、深港合作等方面取得的豐碩成果致以熱烈的祝賀。

2024年，香港應科院在河套深圳園區設立了全資的深圳應科院，是首批入駐河套合作區的重大科技企業和科研專案之一，並在河套開展國際化應用科學研究。

2025年，以及未來更長時間，期盼應科院按照國務院以及香港特區政府印發的河套相關規劃定位，促進應用科學和中試轉化，為深港及國際科技產業合作、企業出海、規則試驗、人才聚育等方面更多賦能。祝願香港應科院、深圳應科院蓬勃發展！



Mr Nelson Chow
周文正先生

Executive Director (Financial Infrastructure),
Hong Kong Monetary Authority
香港金融管理局
助理總裁 (金融基建)

I extend my warmest congratulations to ASTRI in celebration of its silver jubilee. As the HKMA's strategic partner, ASTRI has played a crucial role in jointly building a robust fintech ecosystem in Hong Kong by actively exploring novel technologies, investigating their applications in the financial sector, and nurturing fintech talent. My team and I look forward to continuing our collaboration with ASTRI in its pursuit of excellence in applied research and world-class innovation in the fintech arena.

欣逢應科院銀禧誌慶，我謹致以衷心祝賀。作為金融管理局的策略夥伴，應科院致力於探索創新科技並研究其於金融業的應用，同時培育金融科技人才，為推動香港金融科技生態圈蓬勃發展發揮着重要作用。我和我的團隊期待繼續與應科院合作，在應用研究和金融科技領域創新中追求卓越。



Mr Peter Yan
任景信先生

Director-General,
Office for Attracting Strategic Enterprises
(OASES)
引進重點企業辦公室
主任

I warmly congratulate ASTRI on its 25th anniversary. Over the years, ASTRI has sustained its efforts in promoting the development of Hong Kong's innovation and technology ecosystem through applied research and driving technology commercialisation. I wish ASTRI continued success in the years to come.

衷心祝賀香港應用科技研究院成立25周年。多年來，應科院一直透過應用研究及推動科技商業化來促進香港創新科技生態系統的發展。我祝願應科院未來續創佳績。



Mr Zeng Hong-li
曾紅李先生

Senior Product Manager,
Intel China Network & Edge Group
英特爾(中國)有限公司
網絡與邊緣事業部資深產品經理

Intel and ASTRI have deep collaboration on the 5G TSN project. By integrating Intel's powerful processor technology with ASTRI's profound expertise in the communications field, we achieved stable data transmission, providing robust technical support for application scenarios such as smart manufacturing and telemedicine.

Intel和ASTRI在5G TSN項目上進行深度合作，通過整合Intel強大的處理器技術和ASTRI在通訊領域的深厚積累，實現了數據的穩定傳輸，為智能製造、遠程醫療等應用場景提供了堅實的技術支持。



Mr HK Chan
陳慶強先生

Chief of Operations Engineering
Service & Innovation,
MTR Corporation Limited
香港鐵路有限公司
車務工程服務及創科總管

ASTRI has been our valued partners, helping enhance our operational and management efficiency through innovative solutions. Our new technologies have won several Hong Kong and international awards. We look forward to collaborating with ASTRI to advance Hong Kong's smart railways development, ensuring safe and reliable services for our passengers.

多年來，應科院一直是我們重要的合作夥伴，協助以創新方案提升營運及管理效能。我們共同研發的新科技，已取得多個香港及國際獎項。我們期待與應科院繼續合作，促進香港智慧鐵路的發展，務求為乘客帶來更安全可靠的服務。



Ms Winnie Tung
董美怡女士

Head of SME Banking,
Standard Chartered Hong Kong
渣打香港中小企業銀行主管

It is our pleasure to have collaborated with ASTRI on a number of projects from the White Paper on Alternative Data for SME Financing to applying Federated Learning in offering better banking service for SMEs with our ecosystem partners. We share a common goal with ASTRI to drive innovations and transformation in the industry particularly in supporting SMEs. The ASTRI team has always been professional and exceptional in bringing technical concepts to real-life application for the greater good of the community.

我們很榮幸能夠與應科院合作進行多個項目，從《中小企業另類數據融資白皮書》，到與生態圈合作夥伴一起應用「聯盟式學習技術」，為中小企業提供更優質的銀行服務。我們與應科院擁有共同目標，致力推動行業創新和轉型，特別是在支援中小企業方面。應科院團隊一直以來都非常專業，尤其是在把技術概念轉化為實際應用以造福社會方面表現出色。



Mr Newton Ng
吳義君先生

Commercial Director,
Citybus Limited
城巴有限公司
商務總監

We are pleased to support ASTRI's projects in realizing the vision of autonomous bus system in Hong Kong, a global showcase, with our own transport operational expertise, by applying mainland and overseas technologies and local R&D.

我們樂於支持應科院的項目，利用我們的交通營運經驗，結合國內外技術、本地研發能力，把自動駕駛巴士系統的理念，實現在香港這個國際化都市。



Mr Ricky Wong
王維基先生

Vice Chairman and
Group Chief Executive Officer,
Hong Kong Technology Venture Company
Limited
香港科技探索有限公司
副主席及集團行政總裁

HKTV has been collaborating closely with ASTRI, upholding "innovation" as our core value, strike to make human lives better with advanced technology and system research and development initiatives.

HKTV與應科院緊密合作，以「創新」為核心價值，致力透過先進科技及系統研究與開發，令人類生活更美好。





Mr Komann Deng
鄧勇志先生

CEO and Founder,
SageRAN Technology
廣東世炬網絡科技股份有限公司
董事長

SageRAN Technology and ASTRI have joined forces to advance next-generation mobile communication technologies, including 4G, 5G, NTN and millimetre wave solutions. This collaboration aims to enhance the speed and efficiency of developing innovative base station products.

世炬網絡與應科院合作共研下一代行動通訊技術，涵蓋4G、5G、毫米波及NTN等尖端技術方向，透過物理層等方面合作，有效提升世炬開發基站產品的速度與效率。





VISIONARIES JOURNEYING TOGETHER

創科先鋒 相伴同行

TECH
FOR
EVERYONE●



Ir Sunny Lee
李惠光工程師

BBS, JP

Chairman,
ASTRI
香港應用科技研究院董事局主席



Mr Wong Ming-yam
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Prof Nancy Y. Ip
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President and Morningside Professor of Life Science,
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香港科技大學校長及晨興生命科學教授



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Chairman,
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高錕慈善基金董事會主席



Dr Roy Chung
鍾志平博士

GBS, JP

Founder & Chairman,
Bright Future Charitable Foundation
鵬程慈善基金創辦人及主席



The Hon Duncan Chiu
邱達根議員

Legislative Council Member
(Technology and Innovation Constituency)
立法會議員 (科技創新界)



Mr Stephen Ho
何偉中先生

Co-Founder and CEO,
n-hop technologies Limited
安眺科技有限公司創始人兼首席執行官



Hong Kong Applied Science and Technology Research Institute Company Limited
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