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NURTURING
THE FUTURE
孕育設計未來

NURTURING THE FUTURE OF HONG KONG DESIGN AND INNOVATION WITH TECHNOLOGY

孕育香港設計與創新的未來

TEXT / BRANDO MAK   PHOTOGRAPHY / HONG KONG DESIGN INSTITUTE

Transforming yesterday's impossibilities into tomorrow's reality — that is what the future holds for Hong Kong's design. Of course, to do that, the field of design will have to further integrate with emerging technologies such as artificial intelligence (AI), the Internet of Things (IoT) and virtual / augmented reality (VR / AR). To master these technologies, designers must navigate all future developments efficiently. Fortunately, Hong Kong's design elites have diligently been acquiring new knowledge and pushing boundaries to bring Hong Kong's design to the international stage.

At the same time, advancements in technology and electronic media have dramatically transformed our way of life, culture and ideology, with AI and virtual production paving the way for the future of design. The Hong Kong Design Institute (HKDI) is striding ahead in this respect. The institute is fully engaged in AI and digital design education and has collaborated with local film production corporate Shaw Studios to establish a well-equipped virtual production teaching and filming site. This environment provides students with cutting-edge facilities to learn how to apply AI advanced technology in film production.

Sustainable development is another major trend for the future. The Hong Kong design community is gradually transitioning towards eco-friendly practices. Mainland China's achievements, such as the Qingshan Village in Hangzhou, offer valuable lessons on how one can blend traditional wisdom with modern innovation to come up with sustainable solutions. This village has infused fresh vitality into the original community while focusing on public welfare, sustainability, art and traditional craftsmanship. The Rong Design Library was also established in this village, offering an excellent resource database for designers worldwide.

In design, aesthetics and practicality are equally essential. With the Olympics being held this year, various sports are also on our minds collectively. Modern sports' ubiquity with mainstream design trends makes the relationship between fashion and sports inseparable. How can you create the perfect combination of materials that offer both sleekness and practicality? In recent years, major brands have answered this question by actively developing patented technologies and materials. What stage has material development reached today? Let us explore the evolution of sportswear's fashion and functionality across time and cultures.

Both seasoned veterans and emerging design talents constantly face diverse challenges and fresh opportunities. As a result, we must draw on the city's rich cultural heritage, technical advancement and sustainability, which are key to driving innovation. Looking ahead to the future of Hong Kong's design, we believe it is imbued with boundless vitality and hope.

前瞻未來，相信香港設計將與人工智能（AI）、物聯網（IoT）、虛擬及擴增實境（VR／AR）等新興科技進一步融合，為設計帶來完全嶄新的面貌。過去的不可能將演進成無邊際的可能。同時，設計師必須要掌握相關的技術才能駕馭未來的發展。可幸是香港設計界的精英們，正努力不懈學習新的知識，積極拓展新的發展方向，力求突破界限，把香港設計帶到國際舞台上。

與此同時，科技與電子媒介的進步，令我們的生活、文化及意識形態等跟過去產生了戲劇性的轉變。當中人工智能（AI）以及虛擬製作（virtual production）已成為設計未來的大方向，例如香港知專設計學院（HKDI）便全力投入 AI 及數碼設計在教育領域上，其中又與邵氏影城（Shaw Studios）合作，在錄影廠內建立設備完善的虛擬製作技術教學及拍攝場地，好讓學生們有足夠完善的現代化配套，學習如何運用先進科技於影視製作，提升本地虛擬製作水平。

至於可持續發展導向，同樣是未來的大勢所趨，香港設計界正逐步向環保、節能、升級改造、循環經濟等可持續發展的方向轉型。成功典範例如杭州市的青山村積極把新鮮活力注入原生態村落，在關注公益可持續、藝術設計、傳統手工藝的傳承與發展外，又建設融設計圖書館（Rong Design Library），為來至世界各地的設計師提供一個最優良完善的資料庫。

設計除講求美觀外，實用性也非常重要。今年的奧運熱潮，讓各運動項目成為討論焦點。同時由於運動的普及，時尚跟運動的關係可謂密不可分。那麼如何營造物料、實用性的完美配合？近年各大品牌均積極研發專利技術及物料，至今物料發展又到了甚麼樣的階段？ 我們將從運動服的時尚外觀及功能，探討運動服飾古今中外之沿革。

無論是設計界的前輩精英或後起之秀，我們不斷努力面對不同的挑戰和機遇，一代又一代地為未來撒下優良的種子，同時又莫忘香港這塊福地所賦予我們的文化薰陶。前瞻香港設計的未來，相信必然是滿載活力和希望的。

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MAGAZINE OF HONG KONG DESIGN INSTITUTE

HONG KONG DESIGN INSTITUTE
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A Wave of Virtual Products is
Sweeping the Globe

HOW IT COULD REDEFINE THE FUTURE OF THE FILM AND TELEVISION INDUSTRY

虛擬製作席捲全球
改寫傳統影視產業未來

TEXT / YEUNG TSUI YI   PHOTOGRAPHY / SHAW STUDIOS
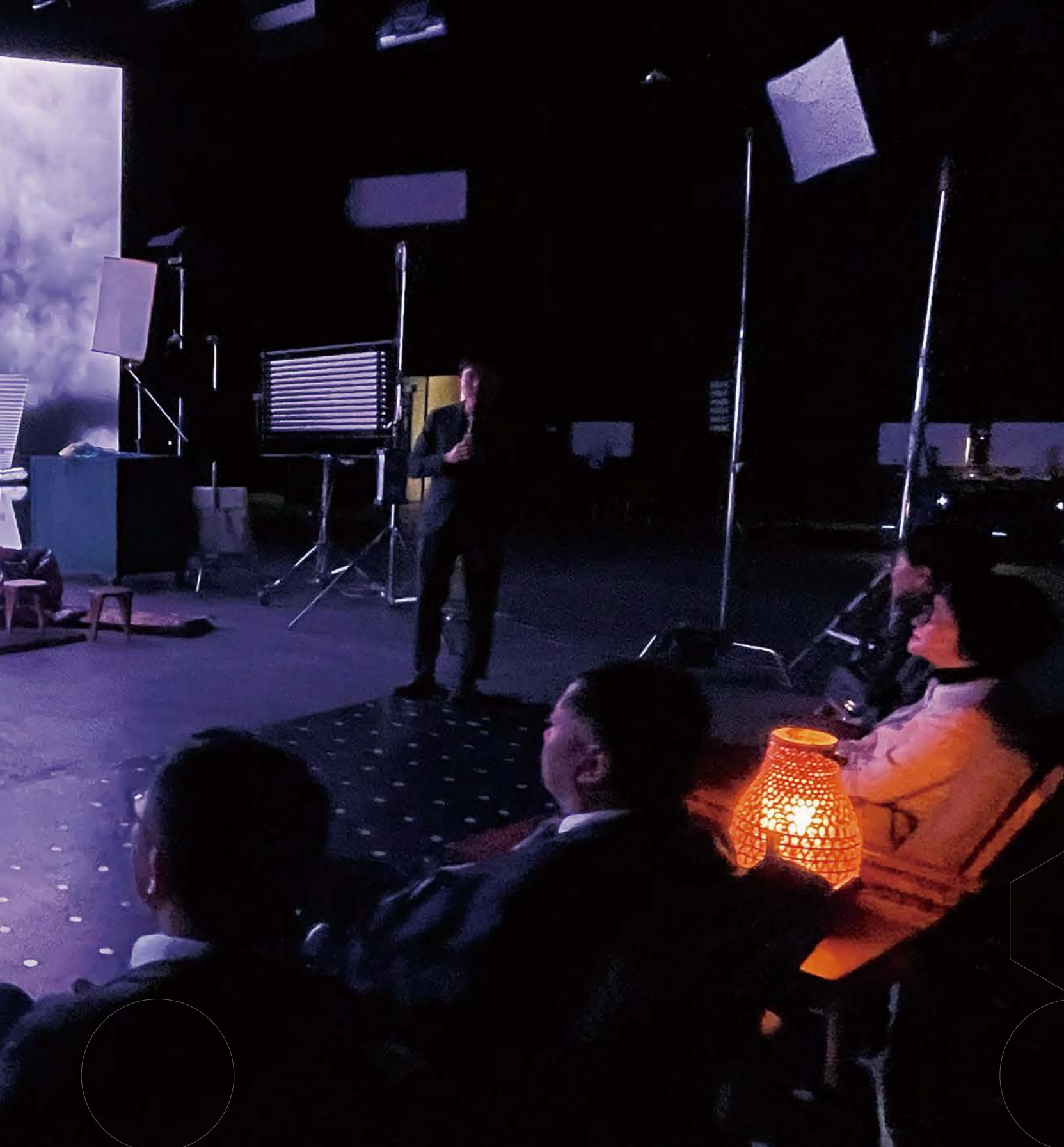
Since its inception, the film and television media has existed squarely at the juncture of art and technology. Media forms like music videos, streaming services and even blockbuster Hollywood films have exemplified this inextricable link. In the past three to four years, though, virtual productions have swept through the world and have been described by insiders in the United States and Europe as marking a "point of no return" for the overall industry due to their real-time ability to produce special effects content. Such technology is gaining momentum in Hong Kong too. In March 2024, an international-level professional virtual production studio officially opened in the city, ensuring that local production is keeping pace with the rest of the world.

融合藝術與科技是全球創意產業新趨勢，以影視製作為例，不論荷里活電影、串流劇集，以至音樂視頻等，與科技經已密不可分。近三至四年，能高效製作出實時特效內容的虛擬製作（virtual production），更被歐美影視界形容為「一條不歸路」，應用與日俱增。在香港，隨著國際級虛擬製作錄影廠於 2024 年 3 月正式啟用，意味本地製作的發展里程，正與世界各地亦步亦趨。

Hong Kong's largest virtual production studio: Training talent with the latest in technology

After nearly four years of preparation, the Hong Kong Design Institute (HKDI), the new studio is currently the largest virtual production studio providing international-level professional virtual production education and shooting facilities in Hong Kong. Housed at Shaw Studios, this 9,000-square foot facility is equipped with comprehensive professional software and hardware, plus basic facilities like control rooms and workspaces. Some highlights include a sophisticated Samsung "The Wall" microLED display with ultimate ultra-high resolution (8K) and pixel pitch of 1.68mm fineness; an ARRI camera and lighting system acclaimed by the film industry and the disguise advanced computer software solution that supports extended reality (XR). Users can instantly integrate virtual and real scenes in the studio, handling up to six scenes simultaneously.

"To excel in filmmaking and its latest techniques, students must be provided with high-standard tools that enable them to enhance their competitiveness and match international professional standards," says Terence Wong, Head of Academic Development at the HKDI. He expects that the new studio will offer students an international learning experience, preparing them for a future beyond Hong Kong.

"Virtual production has been a global focal point since around 2020. It has become increasingly widespread in the United States and Europe; producers have joked that it represents a 'point of no return' and have been incorporating it into their production lists," says Wong. Virtual technology now accounts for 70% of the visuals across numerous streaming series. Wong believes this will soon become a norm, leading to an increase in demand for relevant talent. "Recent data from the United Kingdom indicates that less than 50% of film professionals have six months or more experience in virtual production. It is a similar situation in other major film industries worldwide." The HKDI empowers students studying these skills to seek internship opportunities further afield — including in mainland China, where significant advances have been made in high-tech film technology and local productions.

Forging ahead: Fostering a community of film and television professionals

In response to this growing trend, the HKDI Media Lab has been actively improving student training opportunities to align with global mainstream standards since 2021. The virtual production studio was a logical next step in that direction.

"Technically, Hong Kong is still in the exploration stage, and it might lag behind more mature regions. However, we are on par in terms of creativity and production capabilities," says Wong. He believes that the facility will inspire future creative talent and elevate their production quality.

"We are discussing how the film industry, the HKDI faculty and the students can all collaborate through virtual production. Two former students who are currently working in the film industry are spearheading these efforts, with preliminary conclusions expected shortly."

He hopes these technological advancements will play a crucial role in nurturing talent. Future graduates will be taught to combine creativity with the latest technology to come up with more distinctive, high-quality productions.

How virtual filming can help the industry achieve Environmental, Social and Governance (ESG) goals

Shaw Studios, which has joined forces with the HKDI on building this virtual production studio, hopes that pioneering this top-notch virtual production technology and systems will benefit the local film industry and connect with the world. Helena Young, Director of Production Services and Marketing of Shaw Studios, says that everyone is eagerly anticipating the day Hong Kong can produce more advanced films.

"Using virtual technology in film production is imperative," Young says. "Compared to traditional filming methods, virtual production not only consumes less time and actual costs but also facilitates the implementation of Environmental, Social and Governance (ESG) principles."

For instance, the virtual effects created through virtual backgrounds can mimic the look of real-world locations. This means that films that would have previously required on-location shooting can now be completed without the cast and crew having to travel to the actual sites. Additionally, art and props teams no longer need to construct large physical sets—instead, a scene change can be virtually created with new technology. It saves significant time, manpower and resources, which in turn reduces waste and improves sustainability.

"The filming process is often hindered by external conditions like weather or timing, a sunrise or sunset moment in the script. Virtual shooting eliminates these constraints, allowing outdoor scenes that normally take weeks to be completed in just days. The real-time integration of virtual elements such as instant colour grading and setting changes reduces time and effort spent on post-production as well, increasing production flexibility," Young says.

TERENCE WONG
黃培達
Head of Academic Development
at the HKDI
香港知專設計學院學術發展主管

Developing diverse skillsets to create high-quality productions

Young predicts that the widespread use of virtual production tools will drastically change industry workflow. For instance, a sizeable percentage of post-production work will move to pre-production, resulting in changes to long-standing post-production roles.

"The industry is highly enthusiastic about using this new technology in film production," Young says. "As many studios worldwide are embracing this trend by setting up virtual production facilities, in Hong Kong too there is a strong desire to soon produce its first virtual film."

She hopes that young people with virtual production skills will embrace the rich experience of industry veterans to create new masterpieces. Together, they can maintain the continued brilliance of Hong Kong's local film and television industries, bringing art and technology to a beautiful fruition.

全港最大虛擬製作錄影廠 「軟硬兼施」培育人才

由香港知專設計學院（HKDI）耗時接近四年籌劃的虛擬製作錄影廠，是目前全港最大型的虛擬攝製技術教室及拍攝場地，這個位於邵氏影城的影棚，佔地 9,000 平方呎，內裡專業軟、硬

件設備一應俱全，包括：控制室及工作間等基本設施、像素細緻度達 1.68 毫米的 Samsung 巨型 microLED 屏幕牆、被電影業界譽為「頂級神器」的 ARRI 攝影及燈光系統、以及可支援延展實境（XR）的 disguise 先進電腦軟件解決方案，令大家可在錄影廠內，瞬間結合虛擬場景與實景，並可一邊拍攝，一邊處理多達六個場景，方便整合不同製作內容。

「工欲善其事，必先利其器，想培育精於影視新科技的人才，製作出優質作品，就要向學生提供高水準工具，以便他日與世界各地專業標準看齊，提升競爭實力。」香港知專設計學院學術發展主管黃培達（Terence Wong）預期，嶄新的錄影廠可為學生帶來國際級學習體驗，為日後衝出香港，作好準備。

「虛擬製作在 2020 年左右於全球熱議至今，歐美等地的應用已愈來愈廣泛，各大小監製並笑稱，這已是一條不歸路，創作影片時，都會將虛擬技術列入製作清單之中。」以他所見，早在兩、三年前，不少於大型串流平台上架的劇集，有七成畫面也由虛擬技術生成，他認為，在不久將來，此製作模式將成為恆常化的工作流程，與此同時，業界對相關人才之需求，只會有增無減。

「英國近期公布的數據顯示，擁有六個月或以上虛擬製作經驗的電影從業員，人數比例不足 50%，求才若渴之

HELENA YOUNG
楊勉恒
Director of Production Services and Marketing of Shaw Studios
邵氏影城製作服務及市場推廣總監

程度，可想而知；類似情況，在各大影視產業國亦然。」因此，他鼓勵正努力拿捏這項技能的同學，放眼世界不同國度，包括在高科技電影技術上破繭而出的中國大陸，爭取實習機會，拓闊視野，才可進一步推己及人，優化本土創作。

以前瞻視角
打造影視專才搖籃

藝術科技既是大勢所趨，為了讓學生與時俱進，鏈接高水平影視製作，學院媒體研究所早於 2021 年，積極探索如何在新技術層面，加強對同學的培訓，以回應世界主流。經過與電影業界的連串商討及多番測試，最終認定成立虛擬製作錄影廠，是一個可行方向。

「論技術，尚處於摸索階段的香港，可能會略遜於其他發展較成熟的地區，然而，在創作及製作能力方面，彼此其實不相伯仲。」Terence 相信，隨著虛擬製作錄影廠塵埃落定，對培育創意人才、提升攝製水平，將帶來鼓舞作用。

「目前我們正就電影業界與 HKDI 師生如何攜手實踐虛擬製作，展開探討，兩名現職電影工作的學院舊生，對於相關合作及支援細節，已進行得如火如荼，預期即將有初步定案。」他期待在可見未來，設備先進的錄影廠能發揮培訓人才基地角色，畢業生可學以致用，將創新思維與高科技結合，製作出更多別具特色的水準之作。

虛擬拍攝
有助業界實踐 ESG目標

為 HKDI 提供空間，玉成虛擬製作錄影廠美事的邵氏影城，期望這個先行先試的教學場地，可為業界注入新血，進一步推動本地電影創作，與世界接軌。影城製作服務及市場推廣總監楊勉恒（Helena Young）表示，由於香港至今仍未有電影這類製作，所以大家都引頸以待。「在攝製影片流程中使用虛擬技術，已是勢在必行之事。」她前瞻：「因與傳統拍攝方式比較，虛擬製作所花的時間及實質成本，不單止相對較低，並且有助實踐環境、社會和企業管治（ESG）。」

例如，由虛擬背景製造出來視覺效果，如臨實景，這令本來需要在外地取景的影片，不用演員及製作團隊親赴現場，也可順利完成。另外，有了虛擬製作後，美術及道具組人員再也毋須大費周章，在錄影廠搭建大型實體布景，任何千變萬化的場景也可透過新技術打造，不僅省卻了不少搭建實景的時間和人力物力，亦可避免製造廢料，無形中為環保出一分力。

「電影的拍攝進度很多時會因天氣而受阻，又或工作團隊為了捕捉日出、日落等「魔幻時刻」而苦苦等待，採用虛擬方式拍攝後，便不用受時間所限，可以令一些原本需時數星期的外景拍攝，在數天內大功告成。加上真實與虛擬元素合成的特殊效果，能實時呈現出來，還可即時調色、變換場景氛圍及作其他修改，大家便不用花大量時間與心力，在後期製作工序上，換句話說，不論攝製效率及靈活度，亦大為提升。」

多元人才共融
推動行業高質發展

Helena 預料，當虛擬工具被廣泛使用後，整個工作流程將出現翻天覆地改變，最大的轉變是，由於不少影像是於正式拍攝前創建，換言之，大部分後期製作將變為前期工夫，連帶一些原屬後製的崗位，亦可能會有調動。「目前業界對使用這種新科技製作影片的意欲高漲。」她稱：「當大家得悉世界各地不少傳統片廠也加設了虛擬製作影棚，蓄勢待發迎接今次的大趨勢時，均殷切盼望香港可盡快有第一部虛擬拍攝的作品出現。」

她希望兼收並蓄虛擬製作技術的年青人，在不久將來，可將他們的技能，跟業界一眾前輩的豐厚資歷融合在一起，攜手創作出一部又一部叫好叫座的殿堂作品，令本地影視創作持續閃亮。

Crossing the Online and Offline Worlds

IN THE FUTURE OF INTEGRATED VIRTUAL AND REAL WORLDS, CAN HUMANS LEAD DESIGN?

穿越線上線下　虛實整合未來
人類能主導設計嗎？

The film and entertainment industries are undergoing epochal transformations. Online streaming, high-definition imagery and artificial intelligence (AI) are not just changing business models, these technologies are also radically altering the design thinking that guides media productions.

The Hong Kong Design Institute (HKDI) graduates, Min Chan and Chak Yun Hei, have been playing crucial roles in this transformation. Chan, an Image Director, designs immersive costumes that help in the element of world-building in productions. Chak, a Director of Innovation and Product Development, develops TV hardware and software tailored to future consumer entertainment modes and broadcasting technologies. Their experiences demonstrate how, despite the flurry of technological changes, their respective roles maintain fundamental continuity, with Chan creating beautiful designs and Chak driving industry development.

影視娛樂產業龐大,除了實體或線上平台、營運團隊或台前幕後工作人員之外,原來設計思維亦很大程度上左右著影視娛樂作品質素,甚至能夠改變整個行業生態體系。香港知專設計學院(HKDI)畢業生陳巧倩(Min)和翟潤熙(Hei)分別任職服裝指導和創新產品規劃運營部總監,前者負責設計戲服造型,通過精心的服裝設計,讓演員和觀眾投入戲劇世界;後者則專責研發電視機硬件和軟件,針對未來消費者娛樂模式及播放技術轉變而開發商機。隨著互聯網、串流播放平台、高清影像及人工智能(AI)技術的普及,如何靈活運用設計思維順應影視娛樂產業轉型,是二人無法避免的共同挑戰。兩人的經驗證明,設計不僅是美化表象,更是推動產業發展的重要動力。

CHAK YUN HEI
翟潤熙

Currently the Director of Innovation and Product Development at TCL Corporate Research (Hong Kong) Company Limited, Chak Yun Hei is a graduate of Architecture, Interior and Product Design Department at the HKDI. He previously worked as a Product Designer at Canon, where he won the Red Dot: Best of the Best Award in 2013 for the "X Mark II Calculator".

現職 TCL 工業研究院(香港)有限公司創新產品規劃運營部總監,HKDI 建築、室內及產品設計學系畢業生,曾於 Canon 佳能集團任職產品設計師,在任期間憑 X Mark II 計數機贏獲 2013 年度紅點最佳設計獎(Red Dot:Best of the Best)。

MIN CHAN
陳巧倩

Min Chan is a Film Costume Designer and a graduate of the Fashion and Image Design Department at the HKDI. She has worked on numerous films, television series and advertisements, including "In Broad Daylight", "Warriors of Future" and "Shock Wave 2", as well as the series "I SWIM". She was nominated for the "Best Costume Design" award at the 60th Golden Horse Awards for her work on "In Broad Daylight".

現職電影服裝指導,HKDI 時裝及形象設計學系畢業生,曾參與電影《白日之下》、《明日戰記》、《拆彈專家 2》、劇集《I SWIM》等多部電影、劇集及廣告製作,並憑《白日之下》獲第 60 屆金馬獎提名「最佳造型設計」。

Conscious transformation

Drawing on their experiences of technological disruption, Chan and Chak outline their immediate impact and how they proactively changed their design approaches to align with the new normal, even altering their career paths to better position themselves for the industry's future.

Chan recalls, "In the past, we had to go to libraries or specific websites with accounts to access fashion show information. Seasonal fashion information was minimal, unlike now, where you can access real-time information on Instagram. For some senior practitioners, they struggled with going online and had to rely on clipping magazines and other printed materials for work. Previously, we actively searched for information, but now there's an overload of free information with inadequate filtering, often causing one to feel overwhelmed by AI systems and algorithms and leading to aesthetic fatigue and a sense of conflict."

Today's online image resources provide designers with endless free and convenient images. However, Chan ponders the possibility of this technology replacing current art and design jobs. Chan said, "I experimented with AI to generate works in the style of the movie 'Dune' and American designer Rick Owens. It could generate an entire fashion series beautifully, which felt intimidating. But with increased iterations, the AI output became repetitive."

Based on her experience, Chan believes AI can assist film and art design departments by directly generating atmospheric visuals and colour palettes. However, AI has its limitations regarding the actual production of costumes. "Current AI technology cannot weave a sweater like humans, which is why I believe I still have a few more years of job security before AI fully replaces designers. Moreover, AI-generated character designs lack the 'human touch' and sense of life, which is evident through the lens and human actors' performances."

Reflecting on the media's online transition from the mid-2010s onwards, Chan recalls that many media outlets drastically changed their presentation methods. "Print media declined, becoming network media dominant, with significant differences in reading methods and speeds... Previously, we mainly read A4-sized printed media, where clothes could be adjusted with pins and clips during photoshoots or retouched later. But now, with a focus on film and TV, the process is like moving from 2D to 3D, where tiny details are magnified on giant screens, making even the smallest thread stand out, which is very concerning."

Silent elimination

While Chan is a film and entertainment producer, Chak is the one who brings these works to the audience. As a Director of Innovation and Product Development at TCL Corporate Research (Hong Kong) Company Limited, his products, such as mobile phones, personal computers, digital media and smart TVs, deliver movies and entertainment programmes to consumers today. He has a different perspective on the relationship between technology, design thinking and industry transformation. Chak says, "I graduated with a Product Design and Technology major. My early work focused on craftsmanship. We were among the first batch of academically trained newcomers familiar with Photoshop 4.0, AutoCAD and 3D technology. At that time, many software programmes were still imperfect, with numerous programme flaws. Simply avoiding these pitfalls to complete the work was considered excellent performance in those days."

Chak later managed the design team at Canon, winning the Red Dot: Best of the Best Award in 2013 for the "X Mark II Calculator". However, this experience, which represented the pinnacle of his career at that point, also alerted him to its coming demise. Quite a lot of electronic products were quietly disappearing from daily life, underscoring the urgency of his transformation. Chak said, "Apps have replaced radios and alarm clocks; numerous products have shifted from hardware to software. In traditional industrial design and production lines, software was often seen as a mere accessory to hardware earlier. However, from today's perspective, it is clear that software has become a far more crucial component."

Chak predicted that the outdated hardware-centric models, which were slow to adapt to user experience (UX) expectations, would eventually be phased out for the more responsive app economy. Chak says, "Now the industry emphasises interactive design and UX, which were areas I feared in the past. As a designer, the world is changing, and I need to understand changing user needs and focus on problem-solving. The product forms of the past cannot address future issues." As the product design industry changed and single-purpose gadgets like point-and-shoot cameras and electronic dictionaries disappeared, Chak proactively sought to thrive in the new environment.

"The current situation is similar to the past. Today, many people still do not fully comprehend the capabilities of AI, just as individuals in the past were sceptical about the decline of 'dumb phones' with the rise of smartphones," Chak says. He described how in the past, product designers primarily focused on craftsmanship and product specifications. However, upon joining TCL Group, he found that the scope

Still from the "Best Costume Design" nominee at the 60th Golden Horse Awards, movie "In Broad Daylight".
第60屆金馬獎「最佳造型設計」提名電影《白日之下》的劇照。

of product design had expanded significantly. Chak had to consider UX, system design, interactive design, software engineering, interface design and product and service pricing models. This reflects a crucial trend in technological development — a shift from simple product design to intertwined product and service development schedules.

Embracing the virtual world

Both Chan and Chak note that the rise of the Internet has disrupted traditional pricing, media consumption models and consumer lifestyles, prompting changes on the production end. "On one hand, some people specialise in improving audio-visual data compression technology. For example, YouTube previously used Flash as the default player, but now advanced HTML5 compression technology allows users to access large amounts of high-definition media content more efficiently. On the other hand, some people develop broadband technologies, with the advent of 5G and 6G technology, enabling users to access data-intensive media anytime, anywhere, leading to new changes and shifts in demand," says Chak.

While software supplanted many electronics, it also radically changed many surviving products. TVs no longer broadcast one-way, they support user interfaces and software installations, which in turn has spawned a new ecosystem in the industry. As a Director of Innovation and Product Development, Chak constantly monitors international film and entertainment industry trends to seek out business opportunities amid technological changes. "Current film and media operation models are mainly divided into several types, such as YouTube's AVOD (Note 1), Netflix's SVOD (Note 2) and the continuation of traditional TV's FAST (Note 3), each with different operation models. Many institutions and apps in the US operate local TV stations through FAST, offering users customised media platforms with hundreds or thousands of channels. These economic activities are estimated to generate up to US$200 billions in revenue annually on TV alone." He explains, adding that TCL has not yet benefited from these changes and is contemplating how to enter this new industry.

Chan also felt the change in product functionality. Chan said, "Tasks previously done on computers could later be done on tablets and then on smartphones as users got used to the new forms of devices." Chak added

that the key to whether technological changes will impact at ask lies in the transferability of product demand. "TV screens are so large, yet users cannot perform image editing tasks via remote control, meaning the demand cannot be transferred. Now, with the advent of AI generation technology and the introduction of intent interaction technology, AI-trained systems can interpret human intentions through subtle movements and fulfil complex commands. This will drive large-scale industry transformation. When the entire ecosystem forces you to change, you will change, won't you?"

Who leads whom?

Chak believes AI will revolutionise many industries' operational models, standards and regulations and extend far beyond its current applications. Drawing on his experience with AI-generated video technology and AI assistant software development, he points out that AI's rapid evolution and decline in costs signal its widespread adoption in the coming future, which can potentially overturn traditional production models and businesses. "If industry practitioners fail to adapt proactively, they will be left behind, passively waiting to be overwhelmed by the disruption," Chak predicts.

Chan believes she still has a few more years of job security.
AI-generated character designs lack the 'human touch' and sense of life, evident through the lens and actors' performances.
陳巧倩認為工作仍不會被 AI 取代。AI 生成角色造型會失去『人味』和生活感，這通過鏡頭和演員的表現都能清楚看到。

Regarding how to adapt to technological advancements, Chak says, "All technology is moving towards automation. Designers should not consider themselves as 'craftsmen' in the traditional sense but rather as 'tool users', with management and decision-making capabilities becoming increasingly important. This is similar to Hong Kong's past development, no longer 'factory workers' wielding soldering irons, but production managers."

Indeed, AI generation technology is reshaping industries and elevating the importance of improving management, decision-making and innovation capabilities over simple manual operations. This transformation presents an opportunity for those willing to adapt to new realities. Perhaps these changes will give humans an unexpected chance to continue leading in design.

自覺轉型

回顧過往的科技演變，他們切身感受其中衝擊，主動改變設計方式，甚至扭轉了自己的事業方向。Min 回憶說：「從前要到圖書館或指定網站開立帳戶，才能閱覽時裝發佈會資訊。當季時尚資訊非常有限，不像現在打開 Instagram 就能閱覽即時資訊。一些前輩連上網都有困難，只能通過剪貼雜誌與其他印刷素材工作。以前多數需要自己主動搜尋資訊，反觀現時接受免費資訊太多，缺乏適當的篩選，如被 AI 系統和演算法牽著走，反而感到有些審美疲勞，有時甚至覺得有與其角力的感覺。」

現今網上圖像資源豐富，無疑為設計師提供無限免費資源，帶來方便，但 AI 圖像生成技術隨時生成海量設計圖，不禁令 Min 聯想到科技將會取代現有工種的可能性。她說：「我試過運用 AI，以電影《沙丘瀚戰》和 Rick Owens 的風格生成作品。它不但能夠生成整個時裝系列，而且還非常美麗，當下感到此技術可怕之處。但隨著生成次數越多，作品越來越重覆，我反而稍感安慰，因自己還有多幾年的工作空間。」

根據 Min 的工作經驗，她認為 AI 對電影美術設計部門確有幫助，能直接生成氣氛圖樣和調色版，但對製作戲服貢獻不大 。「單憑現時 AI 技術，它們還無法如人手般編織出一件冷衫。這是我認為工作仍不會被 AI 取代的主要原因。AI 生成角色造型的做法題，但卻會失去『人味』和生活感，這通過鏡頭和演員的表現都能清楚看到。」

回顧 2010 年代中期的變遷，Min 對此有深刻的體會。她回想起那段時期，許多媒體同時走向線上，呈現方式發生了翻天覆地的變化。「紙媒沒落，變成網絡媒體主導，閱讀方式和速度有明顯分別。以前多數閱讀 A4 尺寸紙張印刷媒介，拍硬照時衣服可以利用針扣和夾子補救，或用後期技術修飾。可是現在以影視為主，過程如同 2D 躍升到 3D，巨型屏幕上微小細節一覽無遺，突出來的線頭也一清二楚，令我十分在意。」

靜寂淘汰

假如 Min 是影視娛樂作品的生產者，Hei 則是把影視娛樂作品帶入生活的中間人。他是 TCL 科技集團創意及產品總監，旗下產品如手提電話、個人電腦、數字媒體、智能電視等等都是現代大眾收看電影和娛樂節目的常用設備，對科技、設計思維和產業轉型之間的關係體會更深。Hei 回顧往日：「我是主修產品設計及科技。早年工作偏向工藝，畢業時仍在 Photoshop 4.0，我們算是首批懂得用 AutoCAD 和 3D 技術的學院派新人。當時很多軟件仍未完善，還有很多程式缺陷，只要懂得避開這些漏洞完成工作，已屬表現出色。」

Hei 後來於佳能集團（Canon）負責設計管理，期間憑 X Mark II 計算機奪得 2013 年度紅點最佳設計獎（Red Dot：Best of the Best）。在這段工作經歷中，他逐漸感受到產業正在發生翻天覆地的變化。許多過去常見的電子產品靜靜消失於生活之中，令人感受到轉型的逼切。他說：「收音機、鬧鐘已被應用程式取

代，大量產品從硬件變成軟件。傳統工業設計和生產線，都把軟件視為硬件的附屬功能，設計和製作馬虎，隨便外判請人完成。但從今日角度看，自會明白軟件是更重要的一環。」

按照既定計劃生產傳統電子器材，同時觀察用家需求轉變，他預料長此下去這種模式終被淘汰。他說：「現在業界強調互動設計、使用者體驗（UX），都是我當年懼怕的範疇。世界正在改變，作為設計師，我得了解用戶的需求轉變，著眼如何解決問題。當時的產品形態無法解決以後的問題。」傻瓜機（全自動數碼相機）和電子辭典等產品線陸續消失，驅使他主動求變，應對產品設計之本質變化。

Hei 說：「現在情況跟當時相似，許多人仍未認識到 AI 可以做甚麼，正如當時的人不信傻瓜機會隨手機興起而沒落一樣。」他形容過去產品設計師著重工藝，主力著眼於產品規格。隨後他到 TCL 集團工作，產品設計的視野已大大拓寬，需要考慮 UX、系統設計、互動設計、軟件工程、介面設計、產品和服務收費模式等多個層面。這反映了技術發展的一個重要趨勢——從單純的產品設計，逐步轉向更加全面和系統性的產品及服務開發。

投身虛擬層面

綜觀過去二十年，二人不約而同表示互聯網的迅速發展，的確徹底改變了人們的生活方式和產業格局，傳統營運模式和服務收費規則都要適應時代更替。Hei 進一步解釋說：「一方面有人專門改良影音數據壓縮技術，如 YouTube 以前用 Flash 作為預設播放器，現在 HTML5 壓縮技術已非常卓越，用戶能以更高效獲取大量高清媒體內容；另一方面有人研發網絡寬頻技術，5G 和 6G 技術的問世，用戶能隨時隨地收看數據用量極大的媒體，由此衍生出全新的需求變化和轉移。」

科技發展讓各種電子產品的本質有別從前，電視不再單向播放劇集和廣告，更支援使用介面和安裝軟件的多功能，催生出全新的產業鏈。Hei 身為創新產品規劃運營部總監，時刻留意國際影視娛樂產業動態，自覺要從轉變之中發掘商機。他續說：「時下影視媒體營運模式主要分為以下幾種，例如 YouTube 的 AVOD（註一）、Netflix 的 SVOD（註二），

還有延續傳統電視的 FAST（註三），營運模式各有不同。美國就有不少機構和應用程式以 FAST 營運地方電視台，為用戶搜羅過百、千條頻道內容，定製影視平台。這些經濟活動單在電視機上，一年估計創造高達二千億美金的收益。」Hei 表示，TCL 過去未能在此領域獲得收益，現在正構思如何進軍這個產業。

Min 對產品功能轉變亦有體會。她說：「以前用電腦進行的工序，後來平板電腦也能做到；習慣使用平板電腦後，智能電話又開始能做到相同的任務。」Hei 進一步補充，指出能否轉移需求才是關鍵。「電視顯示屏這麼大，用戶卻無法遙控進行圖像編輯工作，需求無法轉移。現在生成 AI 技術面世，甚至引入意圖互動技術，經 AI 學習之系統能憑細微動作判斷人的意圖，並完成複雜指令。這將會促發大規模產業轉型。當整個生態逼著你改變時，你會不會去改變？」可以看出，技術的發展是一個持續演化的過程，設計師和企業必須時刻關注變化，並主動適應，才能在這個瞬息萬變的環境中把握住機遇，創造新的價值。

是誰主導誰？

AI 生成技術近年不斷普及和快速發展，除了能夠生成服裝樣式、電影氣氛圖、調色板、影片和文字內容，Hei 還相信它會革新許多產業營運模式、作業標準和規則。他根據 AI 生成影片技術、人工智能助理軟體開發經驗，指出 AI 技術急速演化，應用成本大幅下降，進一步普及是大勢所趨，甚至有機會推翻固有生產模式和企業。「從業者一日不轉變，就只能站著等待被淹沒。」

至於如何順應科技發展？他說：「任何技術都朝著自動化的方向發展。我們要明白自己不再是傳統意義上的『工藝人』，而是『運用工具的人』；管理和決策能力將變得更加重要。這跟香港過往的發展一樣，不再是『工廠妹』拿著辣雞（烙鐵）動手焊接東西，而是要管理生產。」AI 生成技術正在重塑各個行業。這需要我們更多關注管理、決策及創新能力的提升，而非簡單的手工操作。只有緊跟技術進步，設計師和企業時刻關注變化並主動適應，才能在瞬息萬變的環境中把握住機遇，創造新的價值。也許這就是人能繼續主導設計的另一契機。

Note 1: AVOD
(Advertising Video on Demand)
This model relies on advertising revenue for profit. Users can watch video content for free but must watch a designated advertisement first.

Note 2: SVOD
(Subscription Video on Demand)
This model relies on membership fees for profit. Users agree to a subscription agreement and pay a specified monthly or annual fee to watch all videos on the platform.

Note 3: FAST
(Free Ad-Supported Streaming Television)
This is a new form of streaming in the audiovisual field, based on advertising revenue, but does not require any monthly fees or even registration.

註一：AVOD
(Advertising Video on Demand)
靠廣告收入來賺取利潤，用戶可以免費觀看影片內容，但觀看前必須先強制觀看一段指定廣告。

註二：SVOD
(Subscription Video on Demand)
此模式是依靠收取會員會費來賺取盈利，用戶只要同意訂閱的協議，繳付指定月費或年費，便可以隨意觀賞平台提供的所有影片。

註三：FAST
(Free Ad-Supported Streaming Television)
是影音串流領域的新興型態，以廣告營收為營利基礎，但不需收任何月費甚至註冊。

Sustainability,
Contemporary Design and
Chinese Heritage

THE FUTURE OF GLOBAL DESIGN

可持續、當代設計及中國傳統建築 ——
環球設計的未來

TEXT / BRANDO MAK　　PHOTOGRAPHY / MULI MUWAI, JIANGNANBUYI+, UGAN CONCEPT

Sustainability, technology and contemporary design have become some of key trends shaping the future of global design. One outstanding example of this is Qingshan Village in Hangzhou, which has blended environmental conservation, modern design, Chinese culture and traditions into its urban planning. This initiative not only exemplifies China's innovative capabilities in sustainable development but also its leading position in the design industry, offering both inspiration and valuable reference point for Hong Kong and the rest of the world.

展望全球設計方向的未來，除電子媒介與人工智能外，可持續發展無疑是最受關注的焦點主題。當中位於杭州的「青山村文創孵化園」，便是其中一個非常優秀的例子，見證了中國如何以前瞻的眼光，把保育環境、當代設計、中國文化，及生活風俗巧妙的融匯成優良的現代建設規劃，從中可賦予我們中國香港，以至世界各地作為最佳的借鏡和參考。它不僅展現了中國在可持續發展領域的創新能力，也充分彰顯了中國在設計界的領先地位。

The origin story of Qingshan Village

Qingshan Village is located in Huanghu Town in the northwest corner of Yuhang District, Hangzhou, approximately an hour's drive from Hangzhou city. Surrounded by lush green mountains and clear waterways, almost 80% of this area is covered by forests.

When global environmental organisation The Nature Conservancy was managing the Longwu Reservoir in 2015 — a drinking water source for Qingshan Village—they discovered fertilisers and herbicides had contaminated the water. After this discovery, China's first rural water source protection project was implemented here, resulting in the reservoir's water quality reaching the national Grade I standard within three years. With a new source of clean and local water, the villagers of Qingshan now have easy access to high-quality drinking water.

In the wake of this success, The Nature Conservancy ambitiously pursued more rural small water source protection projects. With the assistance of village cadres, they used over ¥300,000 from the Free Foundation to lease more than 500 acres of bamboo forest from

43 farmers, allowing the natural environment to self-recover and turn into a lush forest. The remarkable results of Qingshan Village's water source protection project gained widespread attention, leading more people to rediscover the village's almost forgotten natural beauty.

Individuals or groups focused on public welfare, sustainability, art design and traditional craftsmanship have been drawn to Qingshan Village's verdant environment and have come to dive in further. They have successively settled here, using their own expertise to build one vibrant space after another in the village.

Qingshan Village officially began its renewal journey through the opportunity provided by the water source protection, gradually developing a rural revitalisation path supported by nature conservation, ecological tourism and traditional craftsmanship.

Its development has been active and purpose-driven, enriching local cultures by perfectly integrating and promoting sustainable development through contemporary design. This transformation has allowed people worldwide to be inspired by its ambiance and natural wonder.

A design landmark: The construction of the Rong Design Library

In 2010, three renowned designers, Zhang Lei, Jovana Zhang and Christoph John, who founded the PINWU Design Studio, met in Milan and later came to Hangzhou to study local traditions and craftwork.

In 2014, The Nature Conservancy invited them to Qingshan Village. Alongside their design team, PINWU, they taught craftsmanship to the villagers, laying the foundation for

future collaborations. By 2015, the team established China's first traditional materials library, the Rong Design Library, which was dedicated to cataloguing and preserving traditional Chinese materials for global artists and designers. Originally an abandoned and dilapidated building called Dongwu Hall, the site transformed into Rong Design Library under the vision of designer Zhang Lei and his team, who spent a year revamping it meticulously. They seamlessly integrated the preservation of nature and the spirit of Chinese folk tradition into contemporary design spaces.

In 2018, the PINWU designers began practising craftsmanship in Qingshan Village, teaching practical skills like gold net weaving and carving. This initiative not only replaced bamboo forest cultivation, purifying water sources, but also provided villagers with eco-friendly income. The artworks gained recognition and were featured in art exhibitions.

"Based on the deconstruction research of traditional Chinese craftsmanship and materials, we subvert traditional design language, promote the regeneration of traditional crafts and create contemporary design works, which we call Future Tradition."

After more than a decade of efforts, the Rong Design Library completed a nationwide craft survey and continues to attract global designers and environmentalists. More than 30 domestic and international designers now reside in Qingshan Village.

The library's operations are strategic and enduring. Since its inception, the three curators initiated an annual Rong-resident Designer Plan, which invites international designers to mainland China for a month-long residency. During this residency, they can conduct research and craft designs based on traditional Chinese crafts and materials. This programme connects designers and craftsmen from different cultures and fields through on-site crafts exploration, design creation, prototyping and production. They complete a piece or a set of work during their residency.

Since 2015, more than 50 designers from different countries and regions have participated in the programme, including Belgium, Switzerland, the Czech Republic, Japan, Germany, Italy, Thailand, the United States, Portugal, Spain and Hong Kong. In 2023, the library relaunched the Rong-resident Designer Plan and, along with the SaloneSatellite, initiated the Rong Design Award 2023. This relaunch helped spread the design philosophy of Rong globally.

Zhang Lei

Christoph John
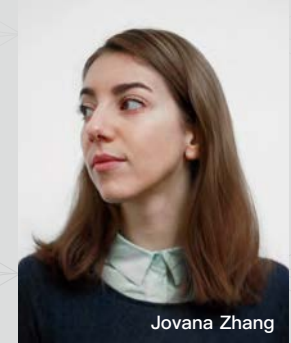
Jovana Zhang

In recent years, with an increasing interest in rural lifestyles, Qingshan Village has become a popular destination for young people. Alongside the contemporary design atmosphere created by the Rong Design Library and its projects, the village presents an intriguing contrast to hectic city life. Amid today's bustling urban pace, this serene land has become a utopia for many city dwellers and an oasis for young people, designers and artists.

Qingshan Village serves as a blueprint for rural revitalisation that can inspire community–centric, sustainable development projects globally.

故事的源起

青山村位於杭州市余杭區西北角的黃湖鎮，距杭州區大概一小時的車程。這裡青山環抱，綠水如茵，森林覆蓋率達80%。在 2015 年，大自然保護協會治理青山村的飲用水源龍塢水庫時，發現周邊水質被肥料和除草劑等污染。透過實施中國首個鄉村水源地保護項目，水庫的水質在 3 年內便達到了國家的一級標準，為青山村村民帶來優質的生活水源。

由於計劃的成功，令大自然保護協會滿載雄心再下一城，探索並展開更具規模的鄉村小水源地保護計劃。先從村幹部的協助下，運用自如公益基金資助的 30 餘萬人民幣，從 43 戶農民手中承包下匯水處的 500 多畝毛竹林，等待自然環境的自我修復。青山村保護水源計劃的成

功，令它聲名大噪，也令更多人認識到這個幾乎已被遺忘、甚至不曾知道它存在的天然美景。關注公益永續、藝術設計、傳統手工藝的個人或團體相繼被青山村的新氛圍所吸引，前來一探究竟，並紛紛落地於此，利用自身的專長在村裡建造了一個又一個充滿活力的空間和組織。

青山村從水源保護的契機下正式開展了更新之旅，逐漸走出一條以自然保護、生態旅遊度假和文創傳統手工藝為支柱的鄉村振興道路。其發展明顯是積極且具鮮明目標，不單為當地帶來豐富的生活文化色彩，更積極地把可持續發展理念和當代藝術和設計完美結合、發揚光大，讓世界各地的人們也有機會被這片樂土的氛圍所薰陶。

設計地標：融設計圖書館

三位背景迥異、來自於世界各地的知名設計師張雷、Jovana Zhang 和 Christoph John 在米蘭相遇，2010 年回到杭州余杭，深度考察當地傳統和手工藝，再加上數年跟青山村村民的溝通與生活體驗，最終促成三位設計才俊進一步跟青山村合作。

在 2014 年，他們三位帶著旗下「品物流形」團隊第一次參訪青山村，教授當地村民手工藝。在 2015 年於村內策建全國第一座傳統材料圖書館──「融」（Rong Design Library），利用圖書館的分類方式，建立中國傳統材料的資料庫與分類系統。在 2018 年，他們開始在村莊實踐「手工藝和造物及生活方式」相循環的設計與生活理想，仔細教導村民金網編織、鏨刻等工藝，取代原來的竹林種植，此舉不但令水源得以有機會被淨化，村民們也可獲得了綠色環保的收入，他們的作品甚至成為了展覽上的藝術作品。

「融」的核心使命貫切三位設計師在 2004 年於杭州成立的「品物流形設計工作室」（PINWU）的設計精神，聚焦中國傳統手工藝與材料的解構，將材料研究的成果提供給全球的設計師和藝術家，並將其應用到藝術裝置、家具設計、交通工具、空間設計、產品設計、平面設計、策展與品牌策略等領域裡。「基於中國傳統手工藝與材料的解構研究，顛覆傳統設計語言，推動傳統手工藝的再生，以及創作當代設計作品，我們稱之為傳統的未來（Future Tradition）！」

經過十餘年的積累，「融」設計圖書館完成了全中國 31 個省區市的手工藝普查，並每年接待數百位來自全球各地的獨立設計師和環保主義者，且吸引了 30 餘位國內外設計師常駐青山村。

而經營館內的業務，全是具策略而恆久性的，例如在圖書館成立之初，三位策展人便發起了一年一度的「駐場設計師計劃」，旨在邀請來自不同國家與地區的設計師來到中國內地駐場期間，基於中國傳統手工藝和材料進行為期一個月的研究和設計創作，以傳統材料來連接不同文化和不同領域的設計師，通過對中國傳統手工藝實地考察、設計創作、打樣和製作等方式完成一件或一組作品。

自 2015 年起，已有來自比利時、瑞士、捷克、日本、德國、意大利、泰國、美國、葡萄牙、西班牙，以及中國香港等國家及地區，超過 50 位設計師參與此計劃。在 2023 年，圖書館重新啟動了「駐場設計師計劃」，並由米蘭家具展衛星展、「融」設計圖書館和感物聯合發起了融設計獎 2023，進一步把「融」的設計精神，推廣至世界的每個角落。

原本是被荒廢及瀕臨倒塌的東塢禮堂，設計師張雷和團隊花了整整一年時間悉心改造，成為了圖書館的所在地。 成功地把保育大自然、中國民間傳統精神，融匯至當代設計的空間與氛圍裡。

這幾年憑著鄉村建設，青山村逐漸成為青年們探索鄉村生活方式的熱門目的地。再加上「融」設計圖書館及其企劃所營造帶出的當代設計氛圍，為這個村落帶來非常鮮明而有趣的對比。在這繁華的城市節奏中，能有一片如清泉般的天地，成為許多城市人心目中的烏托邦，也遂漸成為了年輕人、設計師和藝術家們的一片樂土。

深信青山村的完美藍圖必定能更發揚光大，為世界各地的同類型項目，提供更多正面啟示和發展模式。

Fashion Meets Athletics

INNOVATIVE FUNCTIONAL MATERIALS LEADS NEW ERA OF SPORTSWEAR

運動與休閒並存
革新機能材質引領運動時尚新紀元

TEXT / CHERRY LO
PHOTOGRAPHY / HONG KONG DESIGN INSTITUTE, BOSSINI.X, LULULEMON

The 2024 Paris Olympics came to a close, and it has been dubbed "the most fashionable Olympics" ever with team kits of Mongolia, France and other countries creating quite a buzz online.The eye-catching element of sports attire comes into play for visually attractive events such as gymnastics and synchronised swimming, but fashion has to meet function in the designing of these uniforms, so as to enhance and not impede the athletes' performances.

Take cycling as an example, a sport familiar to Hong Kong. The design of a competition uniform involves complex scientific calculations, emphasising functionality and safety. The materials used must be highly elastic, breathable and sweat absorbent to increase the athletes' comfort. Designers also apply fluid dynamics principles to create streamlined designs and minimise protrusions, reducing friction between the athlete and the outfit to improve aerodynamic efficiency. These outfits undergo rigorous testing prior to competitions to ensure they can protect athletes and enhance performance under diverse conditions.

2024 巴黎奧運圓滿落幕,但其討論度仍日益高漲。作為「最時尚的一屆奧運」,各國運動員隊服及比賽服飾亦成為矚目焦點。對於體操、水上芭蕾等著重視覺效果的比賽項目而言,服飾設計固然重要,但其實各項比賽服飾的功能性同樣對運動員的表現有莫大影響。

以香港人較熟悉的單車項目為例,比賽服飾設計經過複雜的科學計算,著重功能及安全性,如需採用彈性高、透氣及吸汗的物料,以提升運動員的穿著舒適度。同時設計師會利用流體動力學原理,為服飾塑造出流線型的設計,並盡量減少突出物,以降低運動員與衣服之間的磨擦,提高空氣動力學效率。戰衣在比賽前需通過反覆測試,確保能在各種情況下也能保護運動員及提升比賽表現。

New gear for the Hong Kong team

Recently, leisure sportswear brand bossini.X announced its sponsorship of the Hong Kong cycling team and collaborated with the Hong Kong University of Science and Technology (HKUST) to develop the team's cycling attire for the Games. Sharon Chong, General Manager of Bossini Enterprises Limited, shared how this collaboration came about, "The group became a sponsor of the Chinese national cycling team two or three years ago. This year, we began sponsoring the Hong Kong team as a continuation of our commitment."

In 2019, the HKUST's laboratory first applied aerodynamics to cycling, using wind tunnel tests to evaluate cycling equipment and train athletes while developing high-performance racing outfits. In recent years, bossini.X has equipped the HKUST's Aerodynamics and Acoustics Laboratory with advanced cycling aerodynamics testing facilities and a 2.5-metre-diameter low-noise sports wind tunnel for development and repeated testing. The aim is to create suits that provide Hong Kong athletes with a technological edge.

This new generation of competition attire gives Hong Kong athletes a significant technical advantage in the Paris Olympics, leading to better performance. This cross-disciplinary collaboration also signals a new trend in the future development of sports gear.

Further breakthroughs

The brand has developed new exclusive fabric materials for the Hong Kong cycling team, achieving significant breakthroughs in competition attire. The fabric is more elastic and breathable in certain areas, allowing cyclists greater flexibility. The laboratory performed wind tunnel tests on actual athletes, combining supercomputers and 3D scanning technology to calculate their body shapes and fluid dynamics characteristics accurately. Adjustments were made based on individual postures to optimise their performance.

Instead of going for standard-sized cycling attire, bossini.X custom-made each competition outfit for the Hong Kong cycling team members, ensuring each athlete competes confidently and comfortably. After repeated testing, Professor Zhang Xin's team at the HKUST confirmed that the brand's newly developed cycling suit effectively reduces wind resistance by 3%, an improvement over the traditional 2% reduction. Hong Kong team representatives have already worn this new cycling suit at the 2024 UCI Track Cycling Nations Cup in March.

To enhance athlete training, last year, the Hong Kong Design Institute's Centre of Innovative Material and Technology (HKDI CIMT) developed a wearable sensor device, "PostureSense", which uses detachable woven material straps attached to sports shirts to monitor cyclists' riding posture, preventing injuries and improving overall performance. This innovative design won the bronze medal at the 48th Geneva International Exhibition of Inventions and the Red Dot Award: Design Concept 2023 — the latter is often referred to as the "Oscars of the Design World" for its prestigious status. The HKDI CIMT team is currently showcasing an improved second-generation version and negotiating a collaboration with a mainland cycling sportswear brand, which sponsors more than 50 cycling teams worldwide. They plan to test the straps on athletes, incorporating features to measure heart rate, respiration and body temperature.
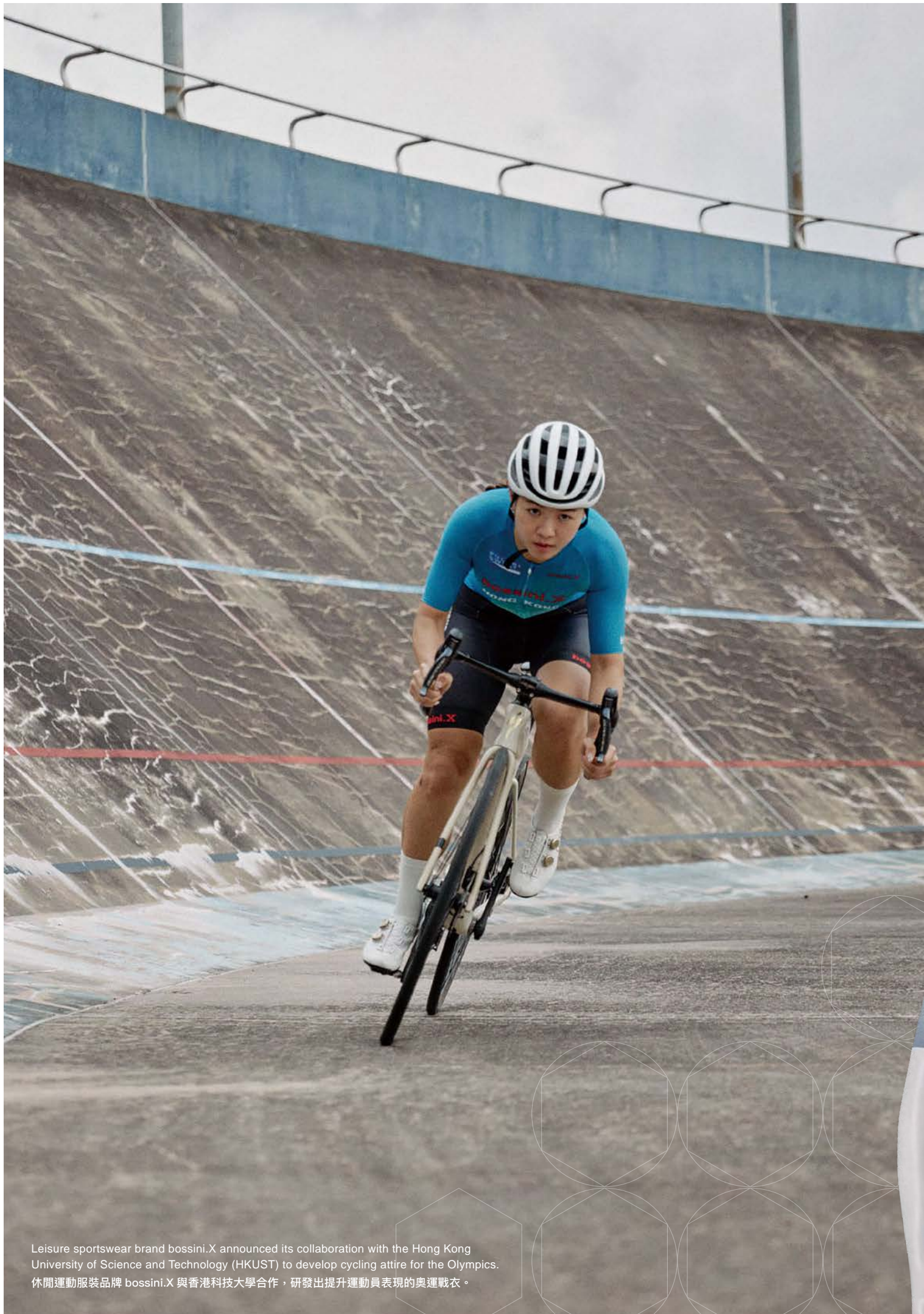
Leisure sportswear brand bossini.X announced its collaboration with the Hong Kong
University of Science and Technology (HKUST) to develop cycling attire for the Olympics.
休閒運動服裝品牌 bossini.X 與香港科技大學合作，研發出提升運動員表現的奧運戰衣。

The HKDI has also teamed up with cycling sportswear brand Santic to co-organise a student design competition, integrating the project into the advanced diploma fashion design course, which attracted more than 80 students. The students in this course created distinctive cycling sportswear using classic cycling culture and surrealism as their design directions. Professional judges selected five finalists, and Santic helped bring to life the students' designs, which were showcased at the HKDI graduation exhibition. This collaboration gave students valuable practical experience, from design conception to final production, broadening their horizons and cultivating their professional abilities.

In future major competitions, the Hong Kong cycling team will be able to leverage cutting-edge advancements in fabric technology, 3D scanning and fluid dynamics analysis. Their state-of-the-art gear will blend innovation with bespoke tailoring, rigorous wind tunnel testing and wearable posture monitoring devices. These improvements promise to bring more glory to Hong Kong and its athletes.

Athleisure trend

Since the 1980s, athleisure has gradually entered the mainstream market, and in the 2010s, it caught on fed by celebrity pictures on social media. In the post-pandemic era, as people increasingly prioritise health, more individuals are adopting exercise habits like hiking and yoga, leading to a transformation in global sports leisurewear brands. Sportswear is no longer limited to exercise — it brings the wearer the best of all worlds: fashion, comfort and functionality. For example, lululemon, founded in 1988 and originating from North America, has developed a variety of proprietary fabrics, such as the quick-drying, breathable and highly stretchy

Nulu fabric and the wrinkle-resistant, breathable and stretchy Warpstreme fabric.

Meanwhile, outdoor sports equipment brand BOA, founded in the Colorado Rockies, has developed the revolutionary patented BOA Fit System. The brand has an independent Performance Fit Lab, with a team of designers, prototype makers, engineers and biomechanics experts conducting independent scientific research both in labs and rugged outdoor terrain. The brand spends over 400 hours annually evaluating elite athletes' performances to collect data. The patented design used in sports and mountaineering shoes, BOA PerformFit Wrap, encloses and fits the midfoot and locks the heel. Scientific testing has confirmed that the design accelerates athletes by 1.5%, reduces ankle rotation speed by 7%, enhances overall stability, and boosts speed, agility and endurance.

In recent years, the general public has raised their awareness on health and wellness, leading to the athletic and leisure elements also becoming a prominent fashion statement. Sports leisurewear will undoubtedly become one of the most prominent fashion elements. With more sports-related technologies emerging, the future will see diverse sports leisurewear that meet contemporary consumers' comprehensive demands for comfort, functionality and aesthetics, allowing both athletes and the public to showcase their confident and stylish side.

**"Some people want it to happen,
some wish it would happen, others make it happen."**

MICHAEL JORDAN
American businessman and former professional basketball player

港隊新戰衣

早前，休閒運動服裝品牌bossini.X 宣佈成為香港單車代表隊的服裝贊助商，亦與香港科技大學合作，研發出迎戰奧運的騎行服。Bossini 總經理 Sharon Chong 與我們分享研發港隊騎行服的緣起：「集團早於兩、三年前已成為與國家單車隊的贊助商。直到今年我們亦開始贊助港隊，希望作為延續。」

早在 2019 年，香港科技大學實驗室首度將空氣動力學應用於單車運動員，透過風洞測試測試單車器材、訓練運動員，同時研發高性能比賽戰衣。近年，bossini.X 在香港科技大學的空氣動力學與聲學實驗室中，配備先進單車空氣動力學測試台，並利用 2.5 米口徑低噪音體育風洞作研發及反復測試，務求為一眾港將研發出帶來更高技術優勢的戰衣。新一代的比賽服，令港將在比賽中增添不少技術優勢，為香港爭取更佳的成績。這樣的跨界合作無疑也昭示了未來體育裝備發展的新趨勢和模式。

再作突破

這次品牌為香港單車隊研發出新的獨家織物材料，在賽服上取得重大突破。面料不僅彈性更好，部份位置亦更加透氣，令運動員比賽時拉伸比率更高。實驗室內亦有騎行模型與真正運動員參與風洞測試，結合超級計算機及 3D 掃瞄技術，精準計算出運動員的身型和計算流體動力學特性，並根據運動員個人姿勢作出專門調整，為運動員締造最佳狀態。
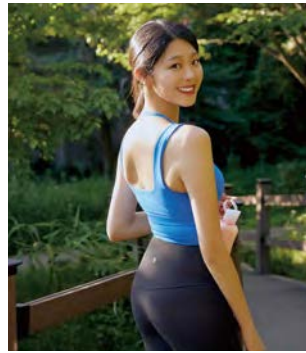
To enhance athlete training, last year, the Hong Kong Design Institute's Centre of Innovative Material and Technology (HKDI CIMT) developed a wearable sensor device, "PostureSense".

去年香港知專設計學院的 HKDI 知專設創源 (HKDI CIMT) 研發出穿戴式傳感裝置「PostureSense」。

有別於一般單車騎行服的標準尺寸，bossini.X 為香港單車隊成員度身訂造每件比賽服，確保每位運動員都能在最自信舒適的狀態下比賽。經反覆測試後，科大張欣教授團隊證實，品牌研發的全新騎行服有效降低 3% 的風阻，比起減少 2% 的傳統技術更進一步；而早於 3 月，港隊代表便已率先穿上全新騎行服出戰 2024 UCI 國家盃場地單車賽，並於巴黎奧運單車場地賽中，再度披上這套新戰衣應戰。

就提升運動員的訓練成效，去年香港知專設計學院的 HKDI 知專設創源（HKDI CIMT）亦研發出穿戴式傳感裝置「PostureSense」，透過扣於運動上衣的可拆式編織物料背帶，監測單車運動員的騎姿勢，預防受傷及提升運動員整體表現。這一創新設計先後勇奪第 48 屆日內瓦國際發明展銅獎，以及被譽為「設計界奧斯卡」的「2023 紅點設計概念大獎」，備受國際肯定。現時 HKDI CIMT 團隊正展出經改良的第二代版本，並與一個贊助全球超過 50 隊單車隊的內地單車運動服裝品牌洽談合作，計劃安排運動員試用背帶，並加入量度心率、呼吸及體感溫度等多種監測功能。

早前，HKDI 亦與單車運動服裝品牌 Santic 合辦學生設計比賽，並將項目融入時裝設計高級文憑課程中，吸引 80 多名學生參與。學生以單車經典文化及超現實主義為設計方向發揮創意，設計出各具特色的單車運動服裝。最終專業評審選出五名入圍設計師，由 Santic 實際生產並在 HKDI 畢業展上展出。這次合作為學生提供寶貴的實踐機會，體驗從設計構思到成品生產的全過程，拓寬學生視野並培養他們的專業技能。

相信在未來的重大賽事中，通過先進的面料研發、3D 掃描和流體動力學分析，結合定制裁剪和風洞測試，同時配合可穿戴式的姿勢監測設備，香港單車隊將以全新的裝備和技術優勢，爭取更出色的成績。

運動休閒風潮

自上世紀 80 年代起運動休閒風 (athleisure) 已逐步進入主流市場，並於 2010 年代開始普及。尤其疫情之後，大眾開始更注重健康，越來越多人開始培養行山、做瑜珈等運動習慣，全球均迎來運動休閒服飾品牌的轉型。運動服飾不再只局限於運動時穿著，甚至成為集時尚、舒適與功能性於一身的潮流指標。我們日常生活中隨處可見人們以單車褲配 T 恤，或是瑜珈褲等運動休閒風格的服飾。這一轉變，反映了當代消費者對於舒適、時尚與功能性的綜合需求。以創立於

1988 年、源於北美的運動服飾品牌 lululemon 為例，研發出多種自主研發的布料，如快乾透氣、良好延展性的 Nulu 面料，以及抗皺透氣、適合拉伸的 Warpstreme 布料等。

與此同時，創立於科羅拉多落基山脈的戶外運動用品品牌 BOA，研發出革命性的專利系統 BOA Fit System。品牌設有獨立的 Performance Fit Lab「性能合身系統實驗室」，擁有具備設計師、原型製作者、工程師及生物機械學家團隊，於實驗室及崎嶇的戶外山地開展獨立科學研究。品牌每年花超過 400 小時，評測精英運動員的表現以收集數據。當中用於運動及登山鞋的專利設計 BOA PerformFit Wrap 可包裹並貼合足中段及鎖住後跟。經科學驗證及反覆測試後，證實設計可加快運動員 1.5% 速度，同時降低 7% 的踝關節旋轉速度，提升整體穩定性，增強運動員的速度、敏捷度及持久力。

近年大眾日益注重健康，運動休閒服飾亦成為矚目的時尚元素。隨著更多運動相關創新科技面世，相信未來將出現更多元的運動休閒服飾，它不僅是一種時尚選擇，更是滿足當代消費者對於舒適、功能與美學的綜合需求，同時讓運動員與大眾都能藉此展現更自信時尚的一面。

Michele De Lucchi

BUILDING THE FUTURE

米凱萊·德·盧奇　築夢未來

TEXT / CHERRY LO　　PHOTOGRAPHY / AMDL CIRCLE

Timeless, ambitious art always transcends the present and points the way to the future. The Hong Kong Design Institute (HKDI) recently invited renowned Italian architect Michele De Lucchi to deliver a lecture titled "The Equation". In his talk, De Lucchi shared his major architectural works and outlined his vision of integrating architecture with immersive environmental art installations. Central to De Lucchi's vision is a humanistic approach to unite communities with nature. Like all true visionaries, De Lucchi opened minds to the limitless possibilities of art through his talk.

自古以來，藝術定義無遠弗界，它不只著眼當下，更放眼未來。早前，香港知專設計學院 (HKDI) 邀請到意大利殿堂級建築師 Michele De Lucchi 親臨演講，並以「The Equation」為主題，分享其創作生涯間的標誌性建築項目，並闡述他對建築與沉浸式環境藝術裝置融合的願景，探討如何以人文方式於社區和自然建立聯繫。藝術從不囿於既有框架，而是以開放、創新的姿態，跨越時空界限，引領觀者領略全新的體驗。De Lucchi 的演講正好印證了藝術的無垠可能性，為未來藝術發展指點迷津。

Michele De Lucchi's lecture "The Equation" revolved around a central creative formula: "Art/Architecture = Environmental Installations (quotient)". He emphasised the importance of integrating the functional aspect of architecture with nature, technology, social context and heritage. His approach to architecture is aimed at balancing human needs and nature.

During the lecture, De Lucchi engaged in a thematic discussion with Steve Leung, Vice Chairman of the Board of Directors at the Hong Kong Design Centre; Alice Fratarcangeli, Director of the Italian Cultural Institute in Hong Kong; and Dr Lay-lian Ong, Principal at the HKDI. The panel discussed how to put De Lucchi's creative philosophy into educational practice, inspiring the next generation of designers to think boldly about how humans relate to architecture.

The day after the public lecture, we had the exclusive opportunity to interview De Lucchi. He elaborated on his sustainable development and shared his perspective on the design approaches practiced by the new generation of architects. His lecture and our interview set a benchmark for thought leadership in Hong Kong's

design community and the industry worldwide. De Lucchi redefined the relationship between architecture, art and the environment and outlined the potential future contours of the architectural field.

Architecture as drama

"Life is like a drama and we are all actors. Everything we do is part of this marvellous performance. This reflects the Italian approach to life — one that is inherently dramatic," says De Lucchi. With a long career spanning design and architecture, he likened his journey to a theatrical performance, emphasising his ongoing attempts to balance his personal preferences with social benefit.

Every individual's action has an impact on society. As community planners, architects make decisions with significant implications for all. He stressed the importance of integrating public needs with avant-garde design elements in harmonious, natural and enriching ways. "We are both individuals and part of the larger society. While we often prioritise our actions, they inevitably affect society and influence others differently." De Lucchi says.

De Lucchi notes that architects juggle two competing roles — maintaining a unique artistic identity and shaping community character. When designing a space, he is acutely aware that his work serves personal and public purposes, bringing his imagination to the broader community.

In his ongoing theme of exploring the potential to merge nature, technology and society, De Lucchi cites the Novartis Pavilion at the 2015 Milan Expo as an example that perfectly embodies these aspects. Inspired by the Earth's crust's dynamics, the pavilion featured a fully recyclable galvanised steel structure, tangibly connecting human and natural environments in form and material.

When asked if he had finally found the perfect stage for his vision and designs, De Lucchi replied, "We are always searching for the best stage — one where we can truly feel like the protagonists of our own lives."

An architectural designer's journey is long and ever-changing. De Lucchi's constant innovation and adaptability inspire the new generation of designers.

Building bridges step by step

Starting a career is never easy, especially as an architect. De Lucchi's early years were especially crucial, during which he struggled with the architect's role and how to contribute meaningfully to modern life. Over time, he realised that designers and architects are responsible for making human living environments more humane. With scientific research demonstrating the positive effects of nature on human minds and bodies, creating naturalistic living environments became De Lucchi's passion.

Talking about his time in Milan during his formative years as an architect, De Lucchi says, "When working in Milan, I was fortunate to collaborate with some of the city's most influential architectural masters, which helped me realise that to contribute and become a bridge, one must first understand and know oneself."

Continuing his search for inspiration and groundbreaking designs, De Lucchi renamed his studio AMDL Circle and invited experts from diverse fields, including chemistry, sociology and medicine, to collaborate. This multidisciplinary approach inspired him to explore new ways of integrating architecture and nature. To facilitate different modes of working and thinking, De Lucchi divided his office into private and open spaces to work alone or with colleagues and friends. This flexible set-up allowed him to implement his vision of balancing environmental design with personal creativity.

Navigating the perils and promises of the information age

De Lucchi has masterminded innovative architectural designs and taught as a professor at prestigious institutions such as Harvard University. He wishes to pass on his experiences and insights to the next generation of architects and designers.

De Lucchi understands the challenges of navigating the information age. Knowledge is readily accessible, making it crucial to filter and use information correctly. With the rapid development and dissemination of artificial intelligence (AI), architects now have a powerful tool to help inspire them and solve manual and design problems.

However, De Lucchi acknowledges AI's perceived challenges to artists, but he also firmly believes in the unique genius of collective human intelligence, which no machine could ever match. "Humans possess minds and brains that computers lack. By connecting all human brains, we can create something more wonderful and powerful than any computer. After all, AI's knowledge is stored in computers. Still, the potential of the human brain remains largely untapped, which makes it so fascinating and beautiful."

Reflecting on his extensive architectural experience, De Lucchi advises the new generation of designers and architects to embrace technology and open themselves to limitless possibilities. "People often try to simplify reality and eliminate diversity, but that is a mistake." He hopes everyone maintains an open attitude to new ideas and approaches to architecture, "The best advice is to accept the world's diversity and find joy in it. After all, the world is rich and colourful, and we have countless ways to face reality and the different characteristics of people. Only by embracing diversity can we build dreams for the future."

「The Equation」講座的焦點在於意大利知名建築師 De Lucchi 提出的創作方程式「Art / Architecture ＝ Environmental Installations (quotient)」。他強調建築不應只是單一的功能性載體，而是應當融合不同人文元素的可能性，如將建築糅合自然、科技、社會性、遺產等，並從中詮釋可持續發展的背後含義——在人類需求及自然間獲取平衡。

在講座中，De Lucchi 與香港設計中心董事會副主席梁志天先生、意大利駐港文化處處長艾子悠女士及香港知專設計學院院長王麗蓮博士作專題討論。他們就如何將 De Lucchi 的創作理念融入教育實踐，為新一代設計師樹立典範，進行了熱烈的交流。

公開講座翌日，我們有幸獨家專訪了 De Lucchi，進一步了解他如何透過創作，體現可持續發展的理想。他亦同時分享了對於新世代設計前景的觀點。De Lucchi 的講座和我們的專訪，無疑為香港乃至全球的設計界樹立了一座可資借鑑的標杆。他以創新的視角重新定義了建築、藝術與環境之間的關係，為未來設計發展指明了方向，值得我們每個人深入思考和踐行。

建築如戲劇

「生活就像一場戲劇，我們都是其中的演員，所做的一切都是這場奇妙表演的一部份，這正體現了意大利人的生活態度 ——人生本來就充滿戲劇性。」從事設計及建築工作多年，De Lucchi 以劇場比喻充滿可能性的設計生涯，指出每個設計都需在個人喜好及社會得益中取得平衡，因為每個人的行為都會為社會整體帶來影響，而建築師作為規劃社區的一份子，其決定影響更甚。因此設計時如何將公眾需求及前衛元素融合成為關鍵：「我們既是個體，也是社會整體。雖然大部份時間我們所做的事都以自己為先，但它們亦會影響到社會，同時在不知不覺間以某種方式影響他人感受。」

De Lucchi 認為建築師一直同時處理「個人性格」及「建構社區人格」的兩種角色。設計一個空間時，他知道不僅是為自己做事，亦是為大眾服務，將他與大眾的想像力連繫。在設計公共建築時，De Lucchi 同時探索融合自然、科技及社會的可能性，如 2015 年米蘭世博會的 Novartis Pavillion 靈感源自地殼形態，並採用可完全回收的鍍鋅鋼結構組成支架，從外形到建築材料都與人類及自然環境息息相關。

當被問到是否找到了設計舞台上最適合的位置時，De Lucchi 謙虛地表示：「我們一直都在尋覓最好的舞台—— 一個讓我們能真正感受到自己是人生主角的舞台。」建築設計師之路漫漫其修遠，De Lucchi 在瞬息萬變的環境中始終保持創新求變的精神，不斷與時並進，值得新一代設計師借鑒。

一步一步搭建橋樑

萬事起頭難，De Lucchi 表示設計生涯初期對他的影響尤其深遠，當時他曾猶豫到底建築師該扮演怎樣的角色、如何真正為當今世界的生活作出貢獻。後來，他慢慢意識到設計師及建築師與人類生活環境的建構密不可分，因此理所當然應該肩負起維護和改善環境的責任。人體由對環境極為敏感的細胞組成，科學研究顯示，若生活於愉快明亮的環境中，能讓人保持積極向上的心態，相反亦然。因此，如何設計出真正成功的生活環境，成了 De Lucchi 職業生涯中首要的追求。

所幸迷茫之時，De Lucchi 遇上助他理解到自己根源、為他指引方向的明燈：「我於米蘭工作時，有幸與當地最具影響力的建築大師合作，讓我領悟到若要作出貢獻及成為橋樑，必須先了解和認識自我。」

上下而求索，後來 De Lucchi 把其工作室更名為「ADML Circle」，並邀請化學專家、社會學家、甚至醫生等設計師以外的專業人士一起合作，希望集結不同領域的觀點和經驗，激發出更多創新思維、建構更多建築與自然相關的嶄新可能性。他將辦公室劃分為私密及開放空間，讓他可根據情況獨自或與朋友、同事或他人一同工作。這兩種截然不同的工作模式相輔相成，使他能全面實踐這個環境設計與個人創造力平衡的理念。

在資訊爆炸的時代自處

抱著成為各個媒介間的橋樑的心，除了致力設計創新前衛的建築外，De Lucchi 亦曾擔任大學教授，並先後於哈佛大學等知名院校執教，致力於將自己的經驗和見解傳授給後輩。

他深知身在資訊爆炸的年代，他有感現在知識更唾手可得，如何過濾及正確過濾和利用它們亦成為重要課題。尤其是隨著近年人工智能發展急速，人工智能創作的藝術作品充斥網絡，相關科技亦不僅能執行技術性的工作，甚至還能生成全新的內容，解決了不少人手和設計問題。對於這種趨勢，De Lucchi 坦言 AI 科技令人們必須應對來自電腦的挑戰，儘管如此，他始終相信集腋成裘的力量：「人類擁有電腦沒有的心智與大腦。若我們連接所有人的大腦，必定能創造出比電腦更加奇妙及強大的能力——畢竟人工智能的知識全儲存在電腦中，但人類大腦的潛能卻遠遠未被開發，這正是人類大腦迷人和美好的地方。」

縱橫建築界多年，他寄語想投身設計及建築行業的新一代，要擁抱科技和接受更多的可能性：「現在人們常常試圖簡化現實，去除多樣性，但這是錯誤的。」正如設計的本質，De Lucchi 寄望大家能保持開放態度：「我會說，最好的建議是接受世界的多樣性，並為此而感到悅樂。畢竟世界多姿多彩，我們有千萬種方式去面對現實與不同人的特質。只有能擁抱多元，才能築夢未來。」

01. Michele De Lucchi with his wood work models in the 2000s.
    Michele De Lucchi 在 2000 年代製作的木工模型。
02. Michele De Lucchi 'Il Tronco' Office building, created in 2012.
    Michele De Lucchi 在 2012 年設計的辦公大樓 — 'Il Tronco'。
03. Michele De Lucchi's current project, Rokko Silence Resort.
    Michele De Lucchi 正在建設的度假村 — Rokko Silence Resort。
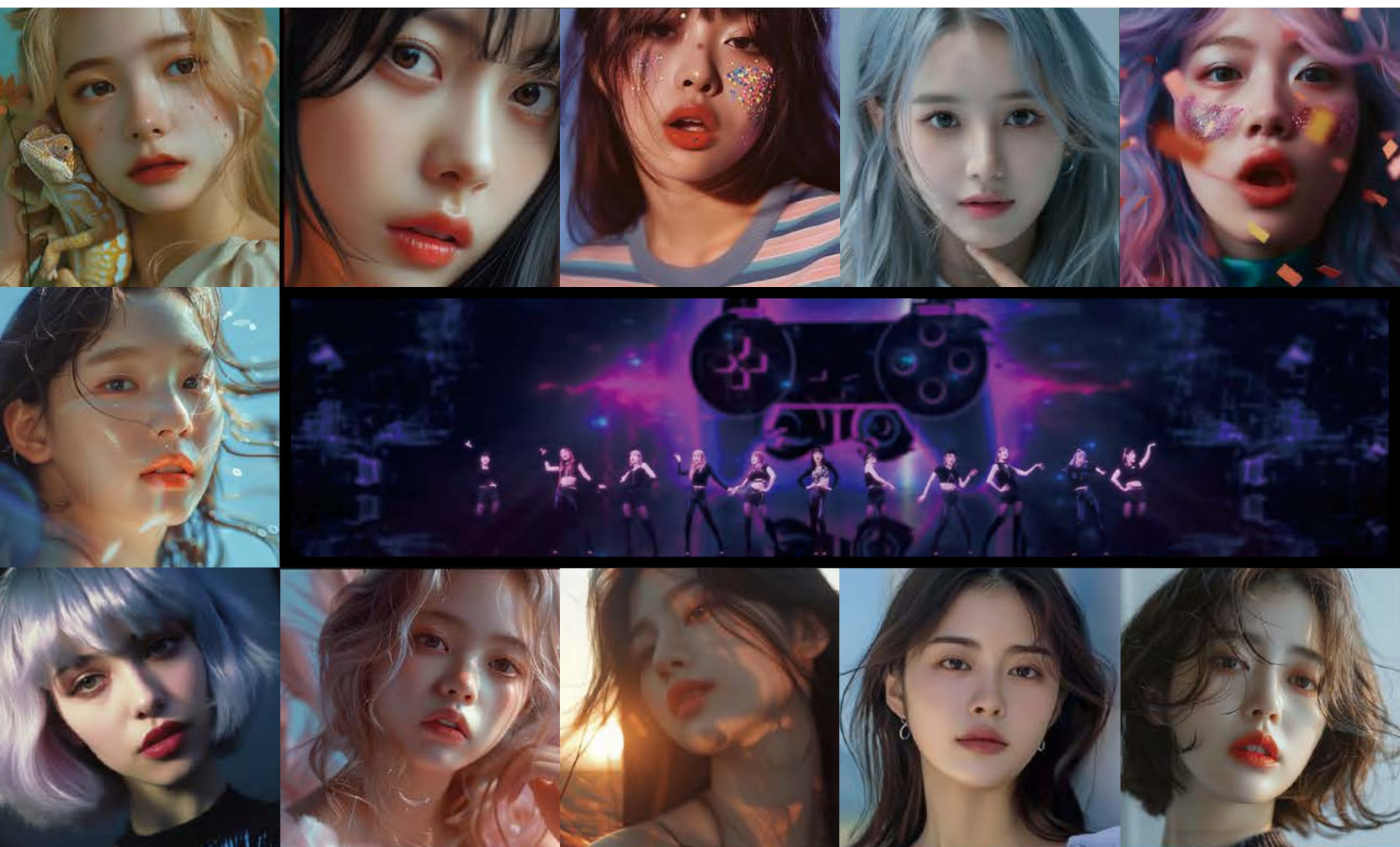
Hallyu IITERNITI
A VISION OF TOMORROW
虛擬偶像 遇見未來

TEXT / CHERRY LO   PHOTOGRAPHY / PULSE9

Following the success of last year's "Viva Italia" Italian Design and Culture Festival, the Hong Kong Design Institute (HKDI) is launching a new extended learning project: the "Hallyu" Korean Design and Culture Festival. This initiative provides students and staff the opportunity to learn about the hallyu or Korean wave phenomenon and its related art and design.

有見去年「Viva Italia」意大利設計與文化節的成功，今年香港知專設計學院 (HKDI) 迎來另一延伸計劃「Hallyu 韓流」韓國設計與文化節，為學生與教職員提供了解韓流及相關藝術設計的學習機會。為期一年的活動早前已正式展開，當中學院將與 Pulse9 的人工智能 (AI) 偶像團體 IITERNITI 的合作，亦將成為重頭戲。讓我們來了解虛擬偶像的秘密吧！

As part of this year-long event, students can look forward to a collaboration project which might see the HKDI teaming up with IITERNITI, one of Korea's first virtual K-pop groups.

Founded by tech company Pulse 9, IITERNITI was formed in 2020 from the "AI Heartbeat Challenge" – where developers invited netizens to select their favourite faces from 101 virtual images, and then created this band based on these choices. This initiative catalysed the entertainment industry to recognise the power of AI as a creative tool, bridging the divide between academic AI research and its application in arts and entertainment.

Since its debut in 2021, IITERNITI has garnered significant attention, with their inaugural single "I'm Real" amassing more than 1.3 million views online. The group has also been featured in a BBC interview discussing the challenges and potential of virtual idols. Last October, they held their first concert, integrating both online and offline elements, further solidifying their status as pioneers in this emerging field.

Developing virtual idols involves multiple challenges, including integrating technology, creating intellectual property (IP) and generating lifelike facial synthesis, animation and voice. It is also a delicate balancing act that seeks profitability while maintaining ethical considerations. Effective fan interaction is equally important in developing fully autonomous AI entertainers.

Developers believe that AI holds vast potential in the entertainment industry. Virtual idols can achieve more innovative and captivating concepts than humans, breaking cultural and linguistic barriers and enhancing fan engagement. Additionally, virtual idols do not require rest and are not susceptible to negative publicity, enhancing business stability and making them valuable assets in the industry.

The arrival of IITERNITI marks the forefront of AI technology in entertainment and opens new chapters for virtual idol development. As technology advances, increasingly creative and ethically sound virtual idols are expected to emerge, bringing fresh experiences to the future of entertainment and popular culture. Stay tuned for the collaboration between the HKDI and IITERNITI.

作為韓國首批 AI 偶像團體，IITERNITI 於 2020 年由「AI 心動挑戰」活動衍生而成。開發商邀請網民從 101 張虛擬面孔中，挑選 11 張最喜歡的臉孔組合 IITERNITI。活動令娛樂界相關人士開始將 AI 技術視為強大的創意工具，同時令本來著重於學術範疇的 AI 研究，引進到藝術娛樂產業之中。

虛擬偶像的誕生激發人類以新形式表達藝術，同時為流行文化提供更引人入勝的替代選擇。IITERNITI 於 2021 年出道後引起廣泛迴響，出道單曲《I'm Real》在網上突破 130 萬觀看次數。組合更曾在 BBC 接受採訪，分享了虛擬偶像的發展議題。去年 10 月更首次舉行結合線上及線下形式的演唱會。

開發虛擬偶像涉及諸多的技術挑戰，包括整合技術及創造知識產權（IP）、創造生動迫真的面部合成、動畫及聲音，同時還需要謹慎平衡盈利與道德考量。此外，如何透過有效的粉絲互動發展出完全自主的 AI 娛樂演員同樣重要。開發商認為，人工智能在娛樂產業中有著廣闊的前景。虛擬偶像可實現比人類更富創新和吸引力的概念，同時打破文化及語言隔閡，促進與粉絲的交流互動。同時，虛擬偶像不需要休息也不會產生負面新聞，這些優勢能提高業務的穩定性，使虛擬偶像成為行業中的重要資產。

IITERNITI 的誕生標誌著人工智能技術在娛樂產業的前沿應用，為虛擬偶像的發展開啟了新的篇章。隨著技術日益進步，相信未來會有更多富有創意、符合道德的虛擬偶像出現，為流行文化帶來全新的體驗。大家記得密切留意 HKDI 與 IITERNITI 之間的合作！

Hong Kong Design Institute
Emerging Design Talents 2024

LEADING SOCIAL CHANGE THROUGH "TRANSFORMATIVE" DESIGN

2024香港知專設計學院年度設計展
以「變換轉化」設計引領社會變革

TEXT / CHERRY LO　PHOTOGRAPHY / HONG KONG DESIGN INSTITUTE

The Hong Kong Design Institute's (HKDI) Emerging Design Talents 2024 is a highly anticipated event that will be held over nearly three months, from June to September, showcasing more than 650 works from graduating students across various disciplines. These fields of study include Architecture, Interior Design and Product Design, Communication Design, Digital Media and Fashion and Image Design. The fashion shows and design performances emphasise how emerging designers are blending technology creatively to bring positive change through a human-centric approach. This collaboration reshapes practices and leverages interdisciplinary teamwork. The Emerging Design Talents 2024 is not only a platform for displaying budding talents but also offers audiences a glimpse into the future of collaboration between design and technology.

2024香港知專設計學院（HKDI）年度設計展橫跨將近三個月，精選應屆畢業生超過 650 項來自建築、室內及產品設計、傳意設計、數碼媒體，以及時裝及形象設計等不同學科畢業生的作品，並以展覽、時裝秀、設計匯演等方式，盡顯新晉設計師結合創新科技的創意。今年的畢業展覽，展示年輕設計師如何透過以人為本的方法，變換轉化，推陳出新。他們重塑實踐，並發揮跨學科協作的力量。設計轉型賦予他們嶄新視角，重新評估如何應用設計於日常生活，挑戰傳統，並培養對社會的正面影響。通過展覽、時裝秀和設計演示等形式，展現了這批新晉設計師結合創新科技的創意成果。這不僅是一個展現他們才華的平台，也是一個讓觀眾一睹未來設計師風采的絕佳機會。

Showcasing new fashion trends through wearable art pieces

The fashion and image show "The Revolutionary Image of the New Generation", under the theme "East Meets West X Norse Mythology". It shows the evolution of fashion trends through a series of wearable art pieces paired with creative make-up, hairstyles and image styling.

The annual fashion show "New Fashion Force" shows off the unique vision and latest trends in fashion design, featuring works from 32 graduates from the Fashion Design Higher Diploma programme. These pieces are a testament to the creativity and talent of the next generation of designers.

Blending traditional and contemporary art forms to inspire the next generation

While art forms can transcend boundaries and continually evolve with time, the pursuit of art remains constant. This creative spirit is reflected in the works of the Visual Arts and Culture Higher Diploma graduates. Combining traditional cloisonné enamel and rice paper flowers techniques with innovative presentation methods, the graduates have created compelling works such as the "Eternal" art piece. Inspired by traditional craftsmanship, this work preserves their unique materials and techniques and reflects their distinctiveness. It is a powerful method of showcasing traditional art forms to the younger generation.

The importance of feminist art inspiration in a modern world

The feminist art movement of the 1960s saw female artists raising awareness of inequality in the art world. Through their powerful creations, they encouraged women to focus on their physical and mental well-being.

Fashion Media Design Higher Diploma graduates were inspired by this movement and decided to collaborate with the fashion brand Charles & Keith to create a video titled "Revive. Reclaim. Rejuvenate.". This project blends ancient and modern elements to explore female charisma and remind modern women to prioritise their health and wellness amid busy schedules. This showcase allows the young designers to advocate for social justice and gender equality.

The intersection of Eastern and Western cultures

Hong Kong has been a continuously evolving melting pot of Eastern and Western cultures for centuries. HKDI's young designers are deeply inspired by this cultural blending and incorporate multicultural elements into their designs. This has been expressed in the work of an Interior Design Higher Diploma graduate who created "The Meridians", a project inspired by traditional Chinese medicine (TCM) and themed on the seasonal effects of environmental changes on the body. This work integrates TCM services with public spaces, crafting an urban oasis that enlightens and inspires the new generation about this fascinating culture.

From left to right 由左至右 :
Revive.Reclaim.Rejuvenate. Charles & Keith featuring Fashion Media Design Higher Diploma graduate.
時裝媒體設計高級文憑畢業生與 Charles & Keith 共同創作的作品 —《Revive.Reclaim.Rejuvenate.》。

What Exactly Do You See, Fashion Design Higher Diploma graduate, Chan Lam Lynn.
時裝設計高級文憑課程畢業生陳琳作品 —《What Exactly Do You See》。

Pure Drape, Architectural Design Higher Diploma Graduate, Ching Yau Ngai Alex.
建築設計高級文憑畢業生程有毅作品 —《純白垂簾》。

Meanwhile, Fashion Image Design Higher Diploma graduates have drawn inspiration from the art forms of Chinese ink wash painting and the Renaissance, blending Eastern and Western elements to create their work called "Rebirth & Relief". This work highlights the shared values of these two distinct artistic traditions, reflecting the spirit of continuous innovation of artistic traditions throughout history. It also demonstrates Hong Kong's unique cultural characteristics and the limitless creativity of young designers who merge Eastern and Western influences.

AI enters the campus to encourage innovation

Artificial intelligence (AI) is a prevailing trend. The HKDI is committed to innovation, bringing virtual production, AI and other leading technologies to the campus.

This year, graduates from the Arts Technology and the Animation and Visual Effects Higher Diploma programmes collaborated with Hong Kong film company mm2 Entertainment to create a story about monsters living in the city. The students used cutting-edge virtual production techniques for real-time filming.

An Architectural Design Higher Diploma graduate used AI to assist in modelling the project "Pure Drape", which is inspired by the birdwatching haven of Po Toi Island. It creates a space where one can safely engage in birdwatching activities while harmoniously coexisting with the environment.

These works showcase HKDI students' ability to harness the power of innovative technology, combining traditional culture with fresh ways of thinking. They have the ability to grasp industry trends while also skillfully using advanced technologies to infuse a blast of creative energy into Hong Kong.

Showcasing local culture through thoughtful symbolism

"Home Away From Home" is a project crafted by Visual Communication Higher Diploma graduate, Cheung Hiu Nam. His work is inspired by neon lights, street vendors and other cultural symbols and memories of Hong Kong. This blind box series embodies the concepts of "Taking Away" and "Feeling at Home"—emotions that help people feel the warmth of home regardless of their location. The blind box includes 3D cards and magnets featuring Hong Kong-style ceramic tile designs interspersed with memes and visual elements from classic Hong Kong films. These subtle details add a collectible touch to each piece.

Meanwhile, Yeung Cheuk Hin, a graduate of Diploma of Foundation Studies - Design explores the evolution of Hong Kong's comic culture in different eras through the book "Exploring Hong Kong Comics". Using the golden age of Hong Kong comics in the 1980s and 1990s as a backdrop, he uses simple, clear images and compositions. Accompanied by popular comics like "Tiger Shark" and "Old Master Q", he coaxes readers to reflect on this gradually declining culture.

These graduation works richly demonstrate HKDI students' understanding and interpretation of Hong Kong's unique culture. Through innovative design approaches, they share the value of local memories and cultural heritage.

Fashion with a social message

Art is life. Fashion Design Higher Diploma graduate Chan Lam Lynn expresses this philosophy through the work "What Exactly Do You See?", which shows how society often misjudges people. While those who do not conform to social norms are often misunderstood and labelled as outcasts or crazy, well-dressed individuals engaging in immoral activities are frequently praised. The work satirises this social phenomenon, highlighting the age-old saying "appearances can be deceptive".

In a constantly changing world, the ability to innovate and create is an essential ingredient for a healthy future. Viewing traditional concepts from new perspectives can bring new insights and creativities. Costume Design for Performance Higher Diploma graduate, Cheung Ka Yee, takes inspiration from Jörmungandr, a mythical snake in Norse mythology. They designed stage costumes featuring the fusion of snakes, dragons and seaworms with 3D printing technology.

This fresh perspective on Norse mythology reshapes the public's perception of ancient myths with dynamic graphic projections. A mysterious, solemn and tech-infused stage effect is one of the highlights of this performance. All in all, these works fully demonstrate students' in-depth understanding and creative interpretation of both contemporary issues and enduring cultural values.

展現新時尚

每年均備受業界矚目的「『形』創新世代」時裝及形象秀，今屆以「East Meets West X Norse Mythology」為主題，向公眾呈現一系列可穿戴的藝術，配合創意化妝、髮型及造型設計，展現時尚潮流的變換轉化。而另一年度時裝秀「時裝新勢力」則從芸芸時裝設計高級文憑畢業生中，挑選其中 32 位的作品，展現獨特的創造力及時尚設計的最新趨勢。

傳統結合現代藝術

藝術形式無遠弗界，也隨時代變遷不斷進步，唯有人們對藝術的追求始終如初，這種精神亦於今屆視覺藝術與文化高級文憑畢業生上得以體現。不論是傳統藝術技藝或當代藝術作品，都隨每個時代的設計師而變換轉化，與時代的巨輪更迭並進。

畢業生透過融合傳統掐絲琺瑯及通草花的獨特技法，加上嶄新的擺設方式，創作出《永恆》一作。這件作品以傳統非物質文化遺產工藝為基礎，不但保留傳統工藝所需的獨特物料、展現非物質文化遺產的技藝，同時反映其獨特性，將傳統藝術延續至年輕一代。這些作品不僅見證了藝術形式的進化，更呈現了設計師們將傳統文化與當代創意巧妙融合的成果。

女性主義藝術啟蒙

上世紀 60 年代，女性主義藝術運動崛起，女性藝術家透過不同的創作，喚起外界對藝術界不平等現象的關注，同時也令當時的女性願意更多關注自身的身心靈健康。

今屆時裝媒體設計高級文憑畢業生受此啟發，與時尚品牌 Charles & Keith 合作，製作及拍攝作品《重拾生活》，以古今結合的方式抒發女性魅力，喚起現代女性對身心健康的重視。這不僅提醒她們在忙碌工作之餘，也要確保充分休息，迎接生活中的種種挑戰。這種融合傳統與當代元素，關注女性身心健康的創作方式，不僅呼應了女性主義藝術運動的初衷，更反映了年輕一代設計師用藝術為媒介，倡導社會正義和性別平等的使命感。

中西文化交匯

香港向來是中西文化交匯之地，匯聚各國多元文化，同時不斷經歷變換轉化。HKDI 的年輕設計師們亦受到中西合璧的文化影響，於設計中融入多元文化元素，發揮創意活力。

The Meridians, Interior Design Higher Diploma Graduates, Lau Ho Hin.
室内設計高級文憑畢業生劉浩軒作品 —《經脈》。

From left to right 由左至右：

What Exactly Do You See, Fashion Design Higher Diploma Graduate, Chan Lam Lynn.
時裝設計高級文憑課程畢業生陳琳作品 —《What Exactly Do You See》。

Legend of Jörmungan, Costume Design for Performance Higher Diploma Graduate, Cheung Ka Yee.
演藝造型設計高級文憑畢業生張嘉怡作品 —《耶夢加德之傳》。

Exploring Hong Kong Comics, Diploma of Foundation Studies - Design Graduate, Yeung Cheuk Hin.
基礎課程文憑 – 設計畢業生楊卓軒作品 —《探 · 港漫》。

中醫學可謂集中華文化之大成，擁有已過千年歷史，近年更逐漸走向世界。室內設計高級文憑畢業生受中醫理念的啟發，以四季環境變化對身體產生的季節性影響為主題，創作作品《經脈》。作品結合中醫服務及公共空間，利用環境的變換轉化養生理念，設計出城市中的清泉綠洲，將中醫文化持續推廣至新生代。

而時裝形象設計高級文憑畢業生，則以水墨畫及文藝復興兩種東西藝術歷史上的重要元素為靈感，創作出中西合璧的《重生》。作品突顯上述兩種藝術形式的共同價值觀，同時也呈現了藝術傳統在歷史中不斷創新求變的精神。這些作品不僅反映了香港獨特的文化特質，更展現了年輕一代設計師融匯中西、創意無限的設計風貌。

當 AI 技術走進校園

人工智能（AI）已成大勢所趨，HKDI 致力將虛擬製作、AI 等領先科技帶入校園。今屆藝術科技高級文憑和動畫及視覺特效高級文憑學生與電影公司 mm2 Entertainment 合作，製作關於妖怪在香港生活的故事，並以虛擬製作進行實時拍攝。

建築設計高級文憑的畢業生，以觀鳥勝地蒲台島為題材創作了《純白垂簾》。運用 AI 技術協助建模，設計出一個既能安全進行觀鳥活動，又能與環境和諧共存的空間。這些作品充分展現了 HKDI 學生善用前沿科技，融合傳統文化與創新思維的設計實力。他們不僅能夠洞悉行業趨勢，更能夠善用尖端技術，為香港注入創意動能，引領設計界發展。

本土文化情懷展現

《有瓦遮頭》由視覺傳意高級文憑畢業生張曉楠精心設計，靈感源自霓虹燈、街頭小販等港人文化符號及地理象徵集體記憶。這盲盒系列將「打包帶走」及「天下為家」的意義實體化，讓大家不論身處何地，都能重現家的溫暖。盲盒內含數款以港式瓷磚為設計元素的立體卡及磁貼，並穿插多部經典港產片的迷因及視覺元素，令每款設計都別具收藏意義。

而基礎課程文憑－設計畢業生楊卓軒則透過《探 · 港漫》一書，探討香港漫畫文化於不同時代的變遷。他以 80、90 年代香港漫畫的黃金時代作背景，以淺白簡潔的圖片及構圖，配上《海虎》、《老夫子》等膾炙人口的漫畫，引導讀者思考相關文化發展，並關注這個逐漸

沒落的文化。這些畢業作品均充分展現了 HKDI 學生對香港獨特文化的理解與詮釋，他們以創新的設計手法，呈現了本土記憶與文化傳承的價值，為香港設計界注入活力。

時尚寓意

藝術即生活，時尚設計高級文憑課程畢業生陳琳透過作品《What Exactly Do You See?》，表達社會上的事物難以判別：言行奇怪或邏輯超前的人容易被大眾誤解、被判定為異類或瘋子，而衣冠楚楚的人明明做著傷天害理的事，卻反而被推崇。作品諷刺這種社會現象，帶出人們難以全面了解事實的真相。

在日新月異的世界中，擁有求變與創作至為重要，若能以新的觀點角度看待傳統概念，定能帶來新見解及創意。演藝造型設計高級文憑畢業生張嘉怡以北歐神話的神秘生物耶夢加德為靈感，將蛇、龍及海蟲合成的幻想生物作設計重點，並結合 3D 打印科技製作舞台服飾，以嶄新角度觀看北歐神話；配合以動態圖型投影製作、神秘且莊嚴而帶科技感的舞台效果，刷新大眾對古老神話的認知。作品均充分展現了學生對當代議題及文化價值的深刻理解和創意詮釋。

Rebirth & Relief, Fashion Image Design Higher Diploma Graduates, Cheung Tsz Kin & Ho Wing Ching.
時裝形象設計高級文憑畢業生張梓健及何穎晴作品 —《重生》。
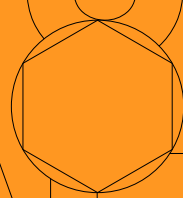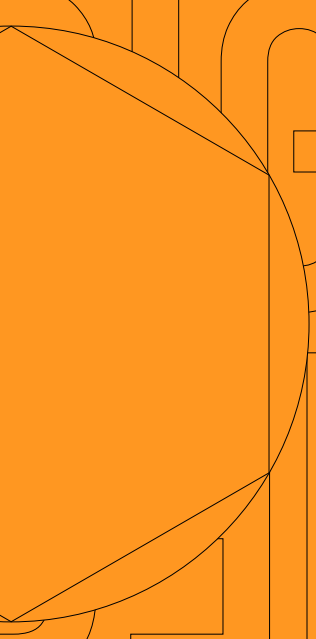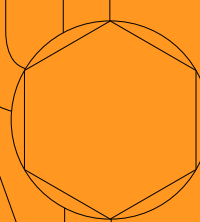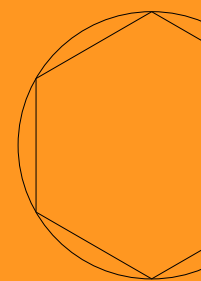
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