

# LEONARDO DA VINCI

達文西

 City University of Hong Kong is proud to present 12 original drawings by Leonardo da Vinci from the Veneranda Biblioteca Ambrosiana, Milan, brought to Hong Kong for the first time to celebrate the 500th anniversary of the artist's death.

Leonardo was first and foremost a polymath inventor and creator. Whether looking at plants, musical harmonies, or elliptical curves of cannon balls, he was fascinated by the world around him. His indiscriminate exploration of the diversity of human and natural knowledge—arts, humanities, sciences and technology—turned him into the exemplar of what is now called a Renaissance man.

Leonardo left behind over 6,000 drawings that reveal his scientific, theoretical, and creative mental worlds that remained largely unknown before the 19th century. Since then, however, his writings, overflowing with artistic, scientific, and technological inventions, have become almost more famous than his artwork. They reveal a polymath whose prescient observations and scientific analyses seem to foreshadow later discoveries.

In tribute to Leonardo's continuing influence, eleven contemporary artists (ten based in Hong Kong) have produced new artworks, imagining what Leonardo might have done in an era of digital media and virtual reality. Fully embedded in contemporary technology, these pieces nonetheless hark back in startlingly direct ways to the legacies of Leonardo's drawings, paintings, and unlimited curiosity.

為紀念達文西逝世五百週年之際，香港城市大學獲米蘭昂布羅修圖書館借出12幅李奧納多·達文西的手繪真跡，並首度來港展出，實乃榮幸之至。

達文西最重要的身分，莫過於博聞強識的發明家與創造家。從花草樹木、悠揚樂曲到炮彈稍縱即逝的軌跡、世間萬物無不觸動達文西窮一生精力探索記錄。他熱愛追求知識，不屈不饒地鑽研藝術、人文、科技等人類與自然等學問，故有「文藝復興人」的典範之稱。

身為同時代最多產的藝術家，達文西留下超過6,000幅手繪，讓世人得以盡覽其科學與理論的卓有成就，窺見其匠心獨運的精神世界。儘管達文西生前被視為畫家，但這數千頁手稿直至19世紀才廣為人知。然而，自此之後，他那些在藝術、科學及技術等層面屢有創見的文章，甚至比其藝術創作更有名。大師的洞察力頗具先見之明，其科學研究彷彿預言了後世的發明。

為向達文西不息的影響力致敬，十一位當代藝術家（當中十位駐居香港）特別創作新作，設想達文西若置身現代，面對數碼媒體與虛擬實境技術，將創造出何種作品。參展藝術家結合新舊媒介，回應達文西對於飛行、運動、光線以至繪畫此一實踐的見解。這些作品完全深入至現代科技中，同時直接呼應達文西的手繪、畫作等豐富的藝術遺產，與大師無盡的好奇心一脈相承。

## INTRODUCTION TO

# LEONARDO DA VINCI

## 李奧納多·達文西：生平介紹

QVE

E



## LEONARDO'S NOTEBOOKS 達文西筆記本

**L**eonardo was by far the most prolific draftsman of his period. Like other earlier architects and artists, he wished to demonstrate his intellectual status by publishing treatises. The difference was the range of Leonardo's planned publications, intending to cover the arts, sciences, and technology. Historians estimate that he was preparing separate treatises on the following topics: anatomy; warfare; painting; movement and physiognomic expression; mechanics; hydrodynamics of water; the flight of birds. It is the spectacular breadth of Leonardo's contributions that have earned him the name of polymath genius. Unfortunately, none of these was ever finished. Only one on painting has come down to us as Leonardo's *Treatise on Painting*.

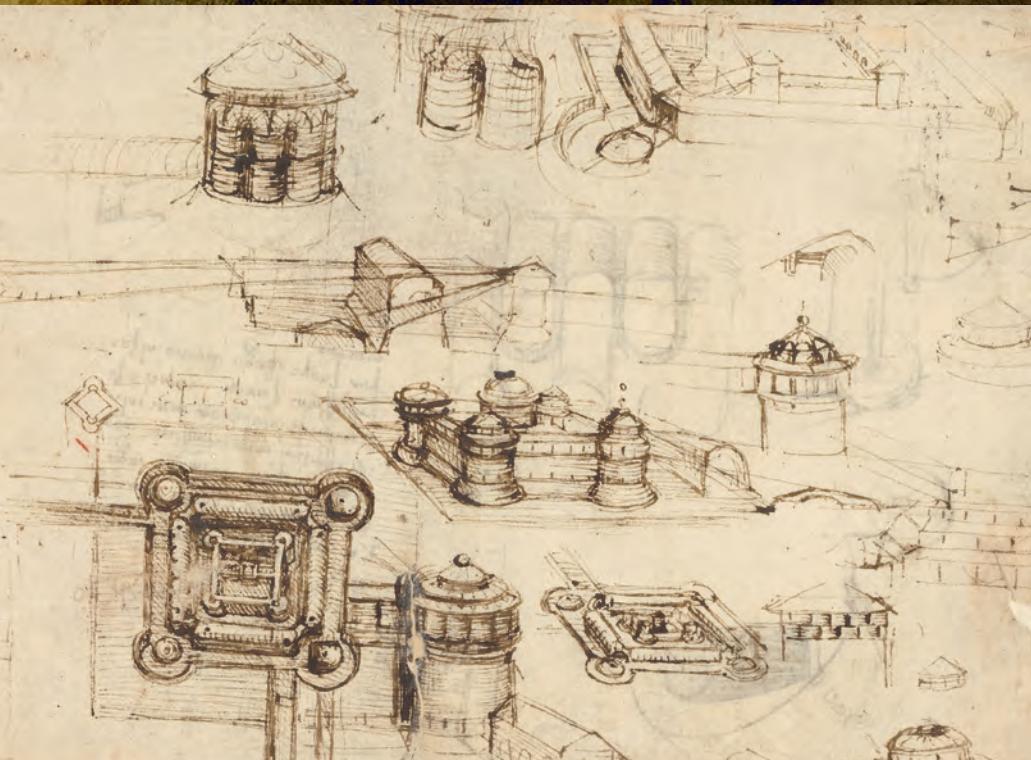
達文西他可謂是同輩中最多產的繪圖者。像其他早期的建築師和藝術家一樣，他希望通過出版論文來展示他的知識分子地位。不同之處在於李奧納多·達文西計劃的出版範圍十分廣泛。達文西的出版計劃所涉獵的範圍包羅藝術、科學以至科技。歷史學家估計他當時預備另章書寫論文，主題包括解剖學、戰爭、繪畫（包括光影、透視和光學）、身體動作和臉部表情、力學、水的水動力學、鳥類飛行模式，以至幾何遊戲（達文西感興趣的數學幾何難題）等等。正正是達文西橫跨藝術、科學及科技三大領域的廣博貢獻，為他得博學多才的稱號。可惜的是，達文西的論文全為未竟之作，只一份有論述繪畫的論文草稿《繪畫論》傳世至今。

# THE CODEX ATLANTICUS

The Codex Atlanticus is the largest surviving Leonardo notebook, consisting of 1119 pages; it passed from Francesco Melzi (initial inheritor of all the codices) through various hands to those of Cardinal Federico Borromeo in the early 17th century, the founder of the Veneranda Biblioteca Ambrosiana, Milan. Giving them to his new created library, Borromeo ensured their preservation and their availability to scholars and artists. The name 'atlanticus' comes from the large pages upon which Leonardo's sheets were originally glued, normally used only for geographic atlases, called '*atlanti*' in Italian. The sheets in the Codex cover the period 1478 to 1519, with subjects ranging from machines for fighting and flying, architecture, and mathematics to botany, musical instruments and figurative designs. They represent the largest collection of Leonardo's theoretical studies, though many pages are also dedicated to technical and military projects, reflecting above all the realities of an artist's life in Renaissance Italy. Leonardo's own presentation letter to the Duke of Milan shows how the artist introduces himself as a military engineer, calling himself "master and artificer of instruments of war." And all but one of the following ten points refer only to his technical and military expertise. Clearly the artist believed that the Duke was looking for a military engineer rather than an artist. Only at the end does he famously add, as an afterthought:

"Also, I can execute sculpture in marble, bronze, and clay. Likewise, in painting, I can do everything possible as well as any other, whosoever he may be."<sup>10</sup>

<sup>10</sup> Matthew Landrus, *Leonardo da Vinci's Giant Crossbow*, Berlin-Heidelberg: Springer Verlag, 2010, p. 17





## 《大西洋古抄本》

《大西洋古抄本》為現存最大型的達文西筆記，共1119頁。原本裝訂成12卷的《大西洋古抄本》，在法蘭西斯高·梅爾全數繼承達文西的手稿後，幾經易手，十七世紀初轉至創立昂布羅修圖書館的樞機主教費德里科·博羅梅奧手中。他將古抄本藏於新成立的圖書館妥善保存，並對學者及藝術家開放。《大西洋古抄本》名稱中的「atlanticus」來自意大利文「地圖集」(atlanti)一詞，因為達文西的手稿最初貼在一些通常只作地圖集之用的大幅紙頁上。這些書卷以「atlantic」版式(即地圖集版式)著稱，故名稱沿用至今。

《大西洋古抄本》涵蓋1478年至1519年的手稿，題材由軍事機械、飛行器、建築、數學到植物學、樂器乃至圖案設計不等，是達文西現存最龐大的理論研究集。儘管其中有不少篇幅為技術及軍事工程內容，但正好反映了文藝復興時期意大利藝術家的現實生活。達文西致米蘭公爵的自薦信中，他自稱頂尖「戰爭武器發明巨匠」，而信中列出的十項重點中有九項僅與其科技、軍事的專業知識相關。顯然，他認為公爵想找的是軍事工程師而不是藝術家。到了第十項，達文西才補充說自己可在和平時期協助公爵開展公共與私人建築工程。直到信末，他方最後才想起來似的，補上極妙的一句：

「我亦能夠以大理石、青銅及陶土等材料塑像，繪畫亦沒有問題，我有求必應，事事做跟其他人一樣出色，不論對方是何方神聖。」<sup>①</sup>

<sup>①</sup>Matthew Landrus:《Leonardo da Vinci's Giant Crossbow》(Springer Verlag, 2010年)，頁17。

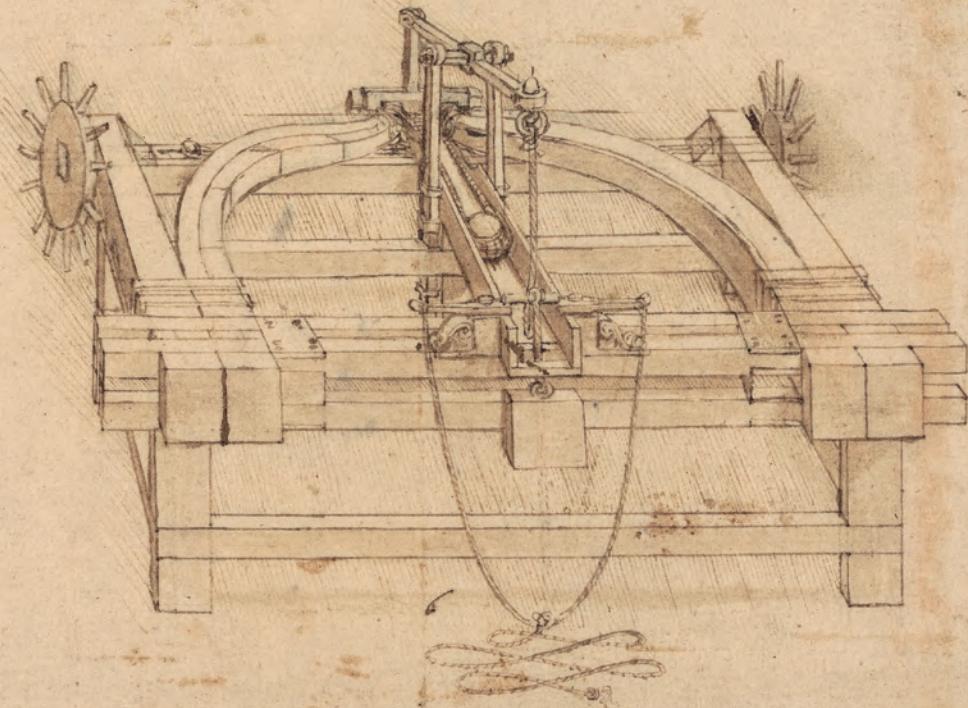


**L**eonardo was initially not well educated, especially lacking in the areas of geometry and mathematics. Over the years he worked hard to make up for his deficiencies and in Milan Leonardo studied with the famous mathematician Luca Pacioli (1447-1517). He also collaborated with him on his treatise, *De divina proportione*, creating illustrations of geometric solids and proportions with 'skeletal' members, so as to make them transparent throughout. C. A. folio 518 recto, though not done for Pacioli's treatise, shows a quadrilateral cubic shape using this presentation, with no occluding surfaces. Leonardo's interest in geometry and perspective is also apparent in C. A. folio 786 recto. Perhaps a copy by a student, the drawing demonstrates the projection of a pyramid onto a flat surface. And Leonardo's well-known fascination with an impossible mathematical problem (the squaring of a circle) is on display in C. A. folios 307 verso and 518 recto.

達文西最初並沒有接受過良好教育，尤其缺乏數學與幾何方面的知識。多年來他努力惡補，在米蘭，達文西與著名數學家盧卡·帕西奧利（1447至1517年）一同鑽研，並為帕西奧利的論文《神聖比例》創作了美麗的幾何立體與比例圖插畫，為此發展出一種展示骨骼式構件的繪畫方式，畫出可穿透的圖形。展品中的對頁518之正面雖然不是為帕西奧利的論文而作，亦同樣以此方式展示了一個可穿透、無封閉表面的四邊形立方體圖形。達文西多年來對於幾何、透視法及投影的興趣，在展出的對頁786之正面中亦可見一斑。雖然這可能是學生的臨摹作品，但手繪圖展示了如何將棱錐體投影於平面上。此外，人所皆知達文西對不可能解決的幾何數學難題（幾何遊戲或化圓為方）深深著迷，或曰沉迷，亦可展出的對頁307之左頁和對頁518之正面中窺得一二。

# LEONARDO'S DRAWINGS MATHEMATICS, GEOMETRY AND ART

達文西的手繪圖  
數學、幾何與藝術



## THE ART OF WAR 戰爭的藝術

ired as a military engineer, Leonardo was interested in the subject and planning a treatise on it. Some of Leonardo's drawings, such as C. A. folios 157 and 160 rectos, done in a highly finished manner, were clearly intended for this purpose. Leonardo there uses orthogonal projection to draw the bent-wood sling, keeping two of the three directional axes (height, length, and width) in proportion to provide accurate measurements. For Leonardo, however, the aesthetics of the machine were just as important as its military efficacy. This belief infuses every projects; regardless of the object's intended function, its aesthetic form remains of crucial concern to Leonardo—be they swords (C. A. folio 366 recto) or machines (C. A. folio 13 recto).

受聘為軍事工程師的達文西對這個題目深感興趣，並計劃撰寫論文。達文西的部分手繪圖完成度相當高，如《大西洋古抄本》對頁157及對頁160之右頁，它們明顯是為了這篇論文而作。值得一提的是在對頁160之右頁，運用了正投影法去繪畫彎木彈弓投石器，確保三條軸心（闊度、高度、深度）的其中兩條比例正確，從而提出準確的測量。然而對於達文西來說，機器的美感與軍用效能同等重要。這種信念貫徹於達文西的每一個項目中，無論是劍（對頁366之右頁）抑或機器（對頁13之右頁），不論物件原本的功能為何，其美感形態仍是達文西關注的重點。

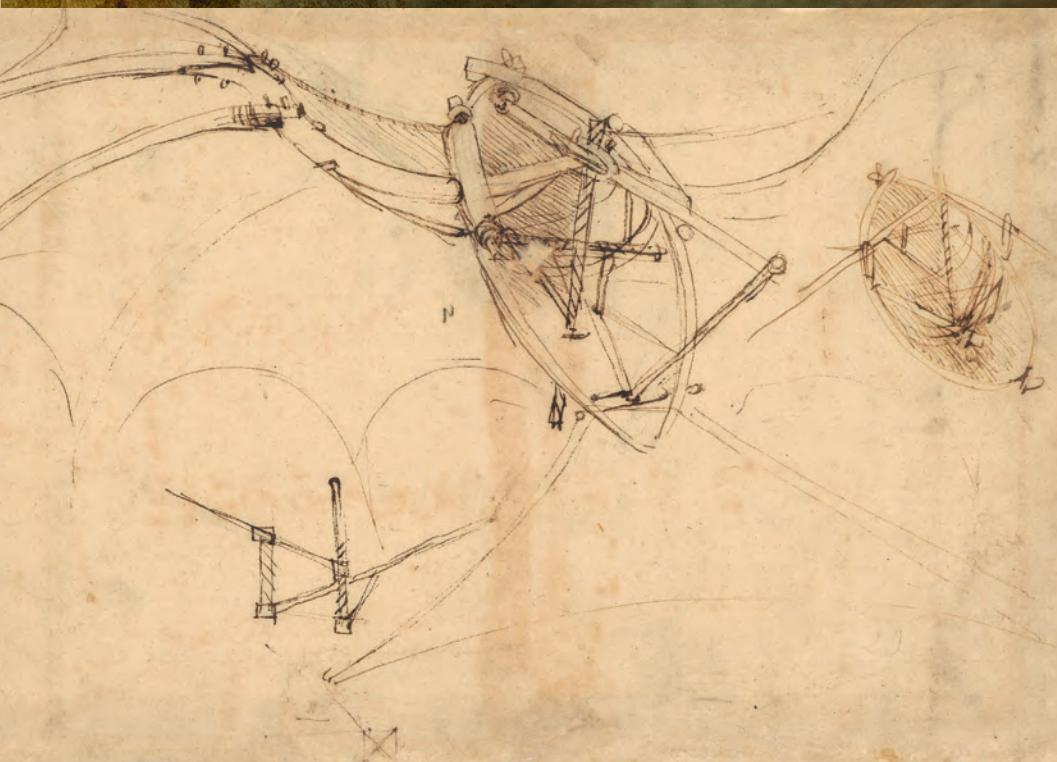
# SCIENCE, OPTICS AND FLIGHT 科學、光學與飛行

**L**eonardo's approach to scientific investigation is best expressed in his *Treatise on Painting*: "But to me it seems that all sciences are vain and full of errors that are not born of experience [...]"<sup>(2)</sup> Though his initial knowledge was derived from classical texts, he quickly turned to empirical research and exploration, as the quote indicates. This included anatomical dissections, the observation of shadows cast by rays of light, and the study of water and flight. The three drawings in the exhibition are perfect examples of Leonardo's approach: C. A. folio 816 recto focuses on the observations of natural rays penetrating clouds; C. A. folio 921 recto explores the anatomy of the human eye; while C. A. folio 860 recto attempts to create a radically futuristic flying machine.

<sup>(2)</sup> Quoted by Juliana Barone, Catalogue 8. *Leonardo: Studies of Motion. Drawings by Leonardo from the Codex Atlanticus*, Milan, Novara: Veneranda Biblioteca Ambrosiana and Istituto Geografico De Agostini, 2011, p. II.

達文西的科學研究手法在所著的《繪畫論》中闡述得最淋漓盡致：「但對我來說，似乎所有科學如非源自經驗都只是徒勞而充斥謬誤。（……）」<sup>(2)</sup> 雖然他最初的知識來自經典文本，但很快就轉投上述引文中所提及的以實踐為依據的研究及探索。這包括解剖研究、觀察光線投於物體的影子，以及研究水與飛行，展覽中的三幅手繪圖正是達文西結合理論與實證科學研究的最佳例子：對頁816之右頁從對自然光穿透雲層；對頁921之右頁解構人類眼球結構；而對頁860之右頁則嘗試創造一架極具未來主義色彩的飛行器。

<sup>(2)</sup> 圖錄8：Juliana Barone：《Leonardo: Studies of Motion. Drawings by Leonardo from the Codex Atlanticus》（諾瓦拉及米蘭，Veneranda Biblioteca Ambrosiana and Istituto Geografico De Agostini，2011年），頁II。



**I**n the history of art, certain persons and works have achieved iconic status, rendering them instantly recognizable and quintessential of an epoch. Leonardo da Vinci is paradigmatic of such figures, embodying a profound convergence of aesthetic, scientific and engineering inquiry. Herein lies the secret of his eternal relevance; he remains a perpetual testament to what human creativity can encompass and achieve.

This exhibition at City University of Hong Kong, in partnership with the Veneranda Biblioteca Ambrosiana, Milan, provides Hong Kong visitors with an unprecedented opportunity to engage with Leonardo's famous drawings that reveal the fecund workings of his imagination and the sublime skill of his draftsmanship. These sheets offer enormous insight into his intellectual and aesthetic processes and reveal Leonardo as researcher - someone who is probing, exploring and questioning in order to arrive at a specific goal, be it artistic, theoretical, or mechanical.

It is therefore pertinent to look at how contemporary artists are pursuing such modes of inquiry, here inspired by the works of Leonardo. The curatorial project of CityU's tenth exhibition is to span the centuries separating our artistic and scientific worlds from those of Leonardo by bringing together 11 artworks in parallel with Leonardo's 12 drawings. Done by artists mainly from the CityU School of Creative Media, these works intentionally show varying degrees of proximity to Leonardo's creations, while demonstrating an aesthetic and creative process grounded in technical (technological) and scholarly (experimental) inquiry. It is this humanistic understanding of science and technology that allows Leonardo and like-minded researchers to bridge the yawning gap between the humanities and science today.

在藝術史上，某些人物和作品的地位出眾超然，成為所處時代觸目可認的典型，李奧納多·達文西正是這類人物的翹楚。他廣泛的跨領域實踐，體現了美學、科學和工程學探索的融匯，意義重大，這就是他持續啟發後世的奧秘，至今仍然是人類創造力所能企及之高與涉獵之廣的永恆明證。

香港城市大學與米蘭昂布羅修圖書館合作呈獻是次展覽，為香港觀眾帶來一個前所未有的良機，從達文西的手繪筆記本中一睹多幅著名畫作閃現的靈光，以及呈現出的豐沃想像和高超技藝。它們對於了解達文西的知性和美學追求，啟發良多，亦揭示了這位研究者如何持續探知、尋索、叩問以達至某個特定的目標，無論在藝術上、理論上抑或機械學上皆如是。

故此，當一批當代藝術家啟發自達文西的原作，並毅然踏上這條上下求索的道路，把目光轉投他們身上確實大有裨益。這個策展項目是香港城市大學的第十個展覽，11件當代藝術品與達文西的12幅畫作同場展出，跨越數個世界，把分隔多時的歐洲近代早期與當代的藝術與科學世界連接起來。參展藝術家主要來自城市大學創意媒體學院，展出的當代作品有意地從不同程度趨近達文西的創作，而所有作品均展示了一種相似的美學和創意過程，均為基於技術（科技性）和學術（實驗性）的探索。正是這種從人文角度理解科學和科技的精神，使達文西和志同道合的研究者能夠彌合當下人文學科與科學之間的鴻溝。

## CONTEMPORARY AND NEW MEDIA ART 新媒體與當代藝術作品

PRESENTED BY 呈獻

City University of Hong Kong Exhibition Gallery 香港城市大學展覽館  
Veneranda Biblioteca Ambrosiana, Milan 米蘭昂布羅修圖書館



ORGANIZED BY 舉辦

Istituto Italo Cinese 意中經濟文化交流協會  
Consulate General of Italy in Hong Kong 意大利駐香港總領事館  
Istituto Italiano di Cultura 意大利總領事館文化處

CURATORS 策展人

Isabelle Frank 范懿莎  
Alberto Rocca

ASSOCIATE CURATORS 副策展人

Jeffrey Shaw 邵志飛  
Nicolas Patrzynski 尼古拉·柏遜斯基

CURATORIAL COMMITTEE 策展團隊

Isabelle Frank, Director, CityU Exhibition Gallery 范懿莎，香港城市大學展覽館總監  
Maria Rosa Azzolina, Director of the Istituto Italo Cinese 意中經濟文化交流協會總監  
College of Fellows of the Biblioteca Ambrosiana, Milan 米蘭昂布羅修圖書館研究學會

- Marco Ballarini, Prefect, Veneranda Biblioteca Ambrosiana, Milan  
米蘭昂布羅修圖書館館長
- Francesco Braschi
- Franco Buzzi
- Pierfrancesco Fumagalli
- Federico Gallo, Director of the Biblioteca Ambrosiana, Milan  
米蘭昂布羅修圖書館總監
- Paolo Nicelli
- Marco Navoni, Vice Prefect, Veneranda Biblioteca Ambrosiana, Milan  
米蘭昂布羅修圖書館副館長
- Alberto Rocca, Director of the Pinacoteca Ambrosiana, Milan  
米蘭昂布羅修藝術博物館總監

VENERANDA BIBLIOTECA AMBROSIANA, MILANO 米蘭昂布羅修圖書館  
Elena Fontana, Collection Registrar 藏品管理員

CITYU EXHIBITION GALLERY 城市大學展覽館

Mei Yee 余美琦  
Wendy Ho 何頴  
Ching Lee 李遵誼

AUDIO-VISUAL PRODUCTION & CATALOGUE DESIGN 視聽及展覽目錄製作  
Nicolas Patrzynski 尼古拉·柏遜斯基

EXHIBITION DESIGN 展覽設計  
Frédéric Beauclair

PRODUCTION DESIGN 製作設計  
Kent Design and Productions Ltd



Consulate General of Italy  
Hong Kong



J.P.Morgan

GIORGIO ARMANI