

Studies in Applied Falling / Hammer and Feather
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策展人 Curators

羅伯·拉·弗蘭內斯 Rob LA FREN AIS
麥克·斯塔布斯 Mike STUBBS

參展藝術家 Participating Artists

塔妮妮·坎迪亞尼 Tania CANDIANI
陳澄如 Yin-Ju CHEN
吉娜·扎奈齊&約翰·杭特 Gina CZARNECKI & John HUNT
伊芙莉娜·多明尼奇&狄米區·傑爾方德 Evelina DOMNITCH & Dmitry GELFAND
尼克·雷辛 Nick LAESSING
那姆·曼特拉 Nahum MANTRA
安娜斯·邁爾－布蘭狄斯 Agnes MEYER-BRANDIS
遠房親戚實驗室（曹存慧、葛昌惠、吳牧青）
Lab of Distant Relatives (Theresa Tsun-Hui TSAO, Chang-Huei GE, Mu-Ching WU)
海倫·皮諾 Helen PYNOR
半導體 Semiconductor
莎拉·史帕克斯 Sarah SPARKES

No Such Thing As Gravity

萬無引力

英國FACT科技藝術交流展
An Exhibition Produced by FACT in Collaboration with NTMoFA

國立台灣美術館
National Taiwan Museum of Fine Arts

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合作媒體 / Media Partner
國立教育廣播電台
National Education Radio

協辦單位 / Co-organizer
BRITISH COUNCIL

FACT

主辦單位 / Organizers
國立台灣美術館
National Taiwan Museum of Fine Arts

指導單位 / Supervisor
文化部
MINISTRY OF CULTURE

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序

國立臺灣美術館 館長
蕭宗煌

近年來在國際新媒體藝術領域中，愈來愈多的藝術家將原屬於科學領域的議題、工具、程序以及理論脈絡，挪用作為其藝術創造之媒介；全球知名的科學研究機構亦紛紛藉由藝術家進駐計畫，展開與藝術家的交流和合作。在這樣的發展趨勢下，國立臺灣美術館特別與英國 FACT 藝術與創意科技基金會合作推出「萬無引力－英國 FACT 科技藝術交流展」，除了引介此種新形態的藝術實踐，亦期盼能藉此機會進一步探討、檢視當前藝術與科學結合可能產生的美學契機與挑戰。

從牛頓到愛因斯坦，物理學者至今對「引力」的存在仍未有統一定論，這揭示一個事實－科學知識並非永恆不變的真理，而是不斷被推翻與發現的過程，與持續探究無法解開之謎的追問。「萬無引力－英國 FACT 科技藝術交流展」策展概念即試圖藉由藝術創作，來探索科學研究尚無法證實的灰色地帶或備受爭議的話題，本展以「萬無引力」為題旨，試圖顛覆觀者對於科學發現的現存想法，挑戰大眾對於「萬有引力」理論的認知，從中檢視關於真理信仰的本質。

「萬無引力」展覽由英國 FACT 藝術與創意科技基金會發想製作，英籍資深策展人羅伯·拉·弗蘭內斯博士和 FACT 基金會藝術總監暨執行長麥克·斯塔布斯共同策展，於 2016 年首度在英國 FACT 藝術與創意科技基金會展出。本次在臺展出計畫，經國美館與英方策展團隊經歷近半年的研究與討論，展覽擴大邀集 11 組 / 位來自澳洲、德國、墨西哥、俄羅斯、臺灣、英國的藝術家，共展出 14 組作品，其中包含 2 組呼應臺灣在地脈絡的全新製作。

本展結合科學家或科學研究機構的密切合作，藝術家得以深入探究發掘不同的科學領域，衍伸有別於主流科學論述的觀點，透過跨領域的創意實踐，讓科學與藝術超越框架彼此激盪，進而回應科學領域中人文及哲學面向的議題。而為更能具體延伸藝術與科學之對話，本館亦規劃辦理「萬無引力－以藝術探索科學之謎」學術論壇，邀請藝術與科學領域的專家學者一同參與討論，期盼能拓展出更豐富的論述觀點與跨領域交流之可能。

「萬無引力」展覽能夠順利在臺展出，特別感謝策展人及英國 FACT 藝術與創意科技基金會的辛勞籌畫，英國文化協會慷慨提供贊助，以及文化部駐英國文化組在整合臺、英兩地相關資源的努力。透過文化部支持之「科技融藝人才國外駐棧創作計畫」，國美館再次連結與 FACT 基金會的夥伴關係，期待本展能帶領臺灣觀眾一探當代藝術與科學跨域創作之發展樣貌，並在揉合理性與感性的觀展經驗中獲得嶄新的啟發。

Preface

Tsung-Huang Hsiao
Director of National Taiwan Museum of Fine Arts

In recent years, a rising number of new media and other artists have engaged with scientific issues, tools, procedures and theoretical contexts for their own art projects. Globally significant institutes of scientific research, such as CERN, have also engaged in active dialogue and collaboration with artists through numerous artist-in-residence programs. Part of this international tendency, the National Taiwan Museum of Fine Arts (NTMoFA) has put considerable energy into mounting the exchange exhibition: “No Such Thing As Gravity”, in collaboration with FACT (Foundation for Art and Creative Technology), the UK’s leading media art centre based in Liverpool. This exhibition is dedicated to introducing this emerging and influential artistic practice as well as exploring and examining the new aesthetic possibilities and challenges created in the combination of art and science.

With “No Such Thing As Gravity” as a theme as well as a title, this exhibition seeks to challenge viewers’ stereotypical views about scientific discoveries in general and the law of gravitation in particular, thereby addressing the question as to what the nature of scientific truth is. From the times of Newton and Einstein to the present, there is no such thing as a general agreement among scientists on the nature of gravitation, which reflects the fact that scientific knowledge is not so much eternal truth as a process of continual falsification and discovery in which puzzles are constantly identified and solved. Conceived by FACT and curated by the experienced international curator Dr. Rob La Frenais and FACT’s Artistic Director & CEO Professor. Mike Stubbs, this exhibition attempts to explore many scientific grey areas and controversial issues. After nearly six months of exhaustive preparations made by FACT’s curatorial team and NTMoFA, we invited eleven artists/artist groups from Australia, Germany, Mexico, Russia, Taiwan and the U.K. to exhibit fourteen pieces of innovative artworks among which two newly created pieces blend harmoniously with the local context of Taiwan. By virtue of their close collaboration with scientists or scientific institutes, the artists in this exhibition delve into different fields of scientific research and add perspectives distinct from the scientific mainstream. These artists’ transdisciplinary creative practice not only enables art and science to transcend their respective confines in an unprecedented manner, but also tackles the humanistic and philosophical issues surrounding science.

NTMoFA also invited experts and scholars from different fields of art and science to the academic forum titled “An Exploration of Scientific Enigmas through Art”, with the aims of encouraging constructive dialogue between arts and sciences, fostering a richer diversity of discourses and perspectives and creating the possibility of transdisciplinary exchange.

The unparalleled success of this exhibition should be particularly attributed to the efforts made by the brilliant curators and FACT, with generous sponsorship from the British Council and the full support of the Cultural Division of Taipei Representative Office in the U.K. in pooling relevant resources in the U.K. and Taiwan. We are more than happy to deepen our partnership with FACT through this exhibition following the Tech x Art residency program. We expect this exhibition to offer visitors in Taiwan a first-hand look at the current development of transdisciplinary collaboration between arts and sciences and also help them find fresh inspirations from their experiences of viewing, featuring an eclectic mix of sense and sensibility.

序

英國 FACT 藝術與創意科技基金會 藝術總監暨執行長
麥克·斯塔布斯 教授

「萬無引力」除了探討特定科學領域，更重要的是它探究了信仰本身。人們對於週遭事物的集體認知來自於基本常識的架構。然而，從近期全球事件可以發現，人們已經可以接受證據與實證性知識以外事物。為什麼人類總是需要透過新的方式想像事物常理，用新的模式探討存在性，來反駁已存的常態及理論呢？

英國 FACT 藝術與創意科技基金會與國立臺灣美術館合作，持續探討上述這個議題，並擴大邀請歐洲、臺灣與其它地區的藝術家參與，讓計畫更深具國際性。

「萬無引力」的挑釁力，來自於其具備顛覆力與實驗性的本質。藝術家們既受到達達主義的影響也結合生物駭客的手法，透露出其中所採納的「正向實驗」的方法論。在科學領域中所存在的種種尚未確立的事實，釋出了全新理論與假設的空間。就是在這些懸而未決的疑惑中，許多假設持續地浮現，使得某些現狀一直被維持著。但是，保有好奇心的人們，就會去探索已知事物之間的縫隙，觀察其中的化學反應，創造出不同的詮釋空間，而有好奇心的組織，如同我們，便透過此次的展覽合作，鼓勵這樣的探討。

客座策展人羅伯·拉·弗蘭內斯與英國 FACT 藝術與創意科技基金會以及國立臺灣美術館的團隊密切合作，透過活潑而且引人入勝的展覽與教育推廣活動，帶來對於科學文化的豐富解讀。我們希望能夠引用 steAm 這個由科學、科技、工程、藝術、數學，五個英文字首縮寫組合而成的單字，強調藝術在各種創新及想像領域中所佔的重要性。

FACT 基金會很榮幸能夠擁抱這些跨越國界、超越利益的概念與議題，每一次的藝術駐村與展覽計劃，皆加深了我們與各單位的合作關係。

Preface

Professor Mike Stubbs
Artistic Director & CEO of Foundation for Art and Creative Technology

In “No Such Thing As Gravity” we not only ask questions of a specific set of scientific theory, but more significantly, question belief itself. Consensus seems to form our collective cognition of that which is around us and as we can see from some recent world events, we are prepared to believe beyond evidence and empirical knowledge. What is it about us humans, needing to imagine new ways of being, or modes of existence, which refute previous norms and theories?

In collaborating with the National Taiwan Museum of Fine Art (NTMoFA), Foundation for Art and Creative Technology (FACT), has managed to continue this enquiry and in the latest iteration, expand the ambition of this project by integrating artists from Europe, Taiwan and beyond; this is truly an international endeavour.

The provocation “No Such Thing As Gravity” places disruption and experiment at its heart. Artists’ practice influenced as much by Dadaism as bio-hacking expresses an ‘experiment positive’ approach; areas of science where the absence of established facts leave room for new theories and speculation. It is in the suspension of disbelief that many assumptions continue, enabling a status quo. Curious people, however, look between the cracks, observe alchemy, create different states for us to inhabit and curious organisations such as ours can encourage this through collaboration such as this.

Rob La Frenais, our guest curator working closely with the FACT and NTMoFA teams, has brought a long and rich understanding of science culture to this process, through a vibrant and compelling exhibition and public programme. In adopting the term steAm, Science, Technology, Engineering, ART and Maths, we wish to emphasise the significance of artists in any formula for innovation and imagination.

FACT is honoured to embrace some of these concepts and questions beyond national interests or borders, ever deepening our partnership through artists’ residencies and exhibition projects.

鬼魅作用

羅伯·拉·弗蘭內斯（本展策展人）

時值第二次量子革命初露曙光之際，量子電腦就要開始翻轉這個數據驅動的世界，不妨趁此時機，來看看從藝術的角度如何詮釋愛因斯坦所稱的「鬼魅似的超距作用」——這是當年他和物理學家尼爾斯·波耳之間，你來我往爭論量子力學之完整性時所提出語帶譏諷的機智回辯。適逢歐洲核子研究組織不久前終於發現了希格斯玻色子時，也應順勢想想天體物理學家其實對組成宇宙68%的暗能量依舊一知半解，對於27%的暗物質亦所知甚淺——即便他們可以從大霹靂理論探測到背景輻射。

與此同時，諸如歐洲核子研究組織以及歐洲和日本的太空總署，甚至是全球各地的科學實驗室，都陸續展開與藝術家的對話，有些還正式辦起藝術家進駐計畫。他們需要接受的事實是，藝術家可能不願完全遵守既定公式。舉例來說，台灣藝術家陳滢如在作品〈超星鑑定〉中探索古文明雷姆尼亞，靈活把攬偽科學和陰謀論。只要有點自持的實驗室，通常會因此拒她於千里之外。她的〈超距作用〉則是以量子糾纏原理為敘事界面來闡釋國家暴力、侵入性醫療行為，和其他相關聯的外部事件，最終表述一個完整且密切關聯的宇宙。當探討科學極限之藝術詮釋的「萬無引力」舉行首輪展出時，來參觀的粒子物理學家和其他方面的科學家都領悟到這個意圖。

在本次展覽中，我嘗試涵括各類型的藝術家，他們一方面關注科學領域的難題，一方面保持和科學領域專家們的對話，如歐洲核子研究組織和利物浦大學的塔拉·席爾斯教授、金匠學院的克里斯·法蘭區教授、利物浦大學的約翰·杭特教授。另類理論、後院科學、無賴科學、鬼魂、不依慣例的解釋——我們發現了當今並不會嚇跑力學不倦、才智過人的科學家的那些領域——都在此展中有所探討，當然也免不了引起爭辯。或許有人會把界線畫在登陸月球陰謀論或蜥蜴全面佔領地球（假設真的可以劃定界線），即便後者可能不失為當前世界概況的諷刺性描述。

藝術家還很擅長帶出事物輕鬆的一面，這似乎能讓整日在實驗室裡分析數據的科學家感到煥然一新。半導體的〈磁性電影〉便是一例，此作中，太空科學實驗室在夜深人靜時，似乎有了自己的生命，化身成擁有超自然能力而且帶點鬼魅感的瘋狂科學家。這部影片最初播出時，超逼真的視覺效還嚇壞了一票人。此作與半導體的另一件〈多重世界形成中〉作品一同展出，該作也運用相近的後製技術，讓影片中的地球看似隨火山引發的地震活動一起波動。類似的作品還有安娜斯·邁爾－布蘭狄斯的〈榔頭和羽毛〉實驗。藝術家在自己的工作室裡，重新創造大衛·史考特在月球上做的實驗。這項經典的論證被藝術家視為現實之不可置疑性與科學研究方法之模糊性的隱喻。此展開幕時，果真有一位眼尖的科學家揪出了讓榔頭和羽毛在地心引力狀態下可以同時落地的秘訣。

同樣鬼魅，但可能較接近科學舒適區的是伊芙莉娜·多明尼奇和狄米區·傑爾方德的〈力場〉及〈量子晶格〉。此作展出時，藝術家在展場展示量子糾纏行為；探索介於光、電動懸浮物、重力之間隱微的交互作用。這些作品雖然具表演性，其基礎都是真實的科學實驗，而觀者也可以用身體去實際體驗「鬼魅作用」。

莎拉·史帕克斯則是小心翼翼地處理信仰和觀測數據之間的細微差別。作品〈鬼客方程式〉利用一項神經科學實驗來探討各種「製造」鬼的方法，同時創造幾個指涉鬼魅的超距作用（此亦引用自黑洞）的入口通道，暗示像在科幻小說裡一樣，或許有一天這些入口可以被用在穿越星際的旅行。有一派理論認為鬼魂有可能是從別的宇宙「漏出」的量子，這與「鬼魅作用」有所呼應。史帕克斯運用不同方式，持續收集利物浦和臺灣的鬼故事，做為建構線上作品〈鬼客入口通道〉的素材。和她密切合作的對象包括異常心理學博士克里斯·法蘭區，和其他研究表象超自然行為的人士。從未親眼「見過」鬼的她，同意法蘭區博士的看法：「我們之中有一群不容忽視的少數人聲稱他們有遇過鬼魂的親身經驗，對我而言，這代表以下兩種可能性的其中一種：假設鬼真的存在，這對人類如何用科學的角度解釋我們在宇宙的位置以及意識的本質，將有深遠的影響；另一方面，假設——如我猜測——鬼並不存在，那麼這些案例則是我們研究人類心理狀態的豐富資訊。」史帕克斯在臺灣安排了一項「鬼交換」計畫，交換的物品為傳統鬼月祭祀時，會燒給好兄弟的紙錢和紙紮品。

過去的十年，藝術家尼克·雷辛走訪世界各地，追查關於自由能源的神話，尤其是以水為燃料來開車的種種主張。在〈水煤氣車〉中，他決定用盡對這方面做的研究所累積的知識，試著實際打造一台。「萬無引力」首輪展出時，他開著一台用水解水交替使用的改造福斯車來到展覽現場。他既不接受也不排斥這項實驗會成功的可能性。

由吉娜·扎奈齊和約翰·杭特共同創作的〈傳家珍寶〉探測醫療科學的極限，以及運用細胞生長讓青春永駐的可能性。藝術家扎奈齊及科學家杭特著眼在個人身分面上的創新發展所可能帶來的潛在影響和可以「製造」自己的可能性，創造出一個有生命的組織生長過程，用精緻的皮膚細胞勾勒出扎奈齊女兒們的面貌。此計畫虛構了一個未來臉可以如何發展和想像的文化實驗室。觀者看著這些人體之外的人臉時，在心理上會走過人類學家口中的「恐怖谷」狀態——一個闡述歷經真實和逼真的理論。

海倫·皮諾的創作〈終點是一個遙遠的記憶〉探討在細胞和經驗層次上生死的模糊交界。2015年在德勒斯登的馬克斯·普朗克分子細胞生物學與遺傳學研究進行藝術家

Spooky Action

Rob La Frenais (Exhibition Curator)

At the dawn of the second quantum revolution, when quantum computers are set to transform our data-driven world, it is interesting to consider some artistic interpretations of Einstein's withering riposte: 'Spooky Action at a Distance' in his battle with physicist Niels Bohr over the completeness of quantum mechanics. In the light of CERN's once-in-a-lifetime discovery of the Higgs boson, it is also worth considering that despite being able to detect background radiation from the big bang, astrophysicists are still literally in the dark about 68% of the composition of the universe in the form of dark energy and still know very little about the 27% of dark matter.

At the same time, institutions like CERN, the European and Japanese space agencies, and science laboratories around the world, are beginning to welcome dialogue with artists, in some cases instigating formal residencies. They will need to accept that artists do not always wish to follow the prescribed formulas. For example Taiwanese artist Yin-Ju Chen actively flirts with pseudoscience and conspiracy theory in her Lemurian explorations in *Interstellar Evaluations*. This would normally get her kicked out of any self-respecting lab. Yet her work *Action at a Distance* directly refers to Einstein's initial taunts about quantum mechanics before developing his special theory of relativity, which explained entanglement - 'Spooky Action at a Distance'. She offers a quantum entanglement type of interpretation on incidents of state violence, invasive medical procedures and other external events, ultimately describing a cohesive and interwoven universe. This was not lost on visiting particle physicists and other scientists who visited the first edition of the new exhibition "No Such Thing As Gravity" which investigates artistic interpretations of the limits of science.

In this exhibition I have tried to present a broad range of artists who approach these difficult areas of science while maintaining a dialogue with science professionals such as Professor Tara Shears from CERN and Liverpool University, Professor Chris French of Goldsmiths University, and Professor John Hunt of Liverpool University. Alternative theories, backyard science, rogue science, ghosts and unconventional explanations are all explored here - areas that nowadays actually don't scare off intelligent scientists with enquiring minds, we have found - although there will always be a debate. One might perhaps draw the line (if there is a line to be drawn) at lunar landing conspiracy theories or lizard world domination, although the latter might be a suitably satirical description of current world events.

Artists are also good at playfulness, which scientists can find refreshing after a hard day's data-crunching in the lab. For example Semiconductor's *Magnetic Movie* in which the Space Sciences Laboratories apparently take on a supernatural, spooky, mad-scientist life of their own late at night shocked some when it first appeared as it appeared so real. It was shown along with their project *Worlds in the Making* in which using similar techniques, the

駐村計畫期間，皮諾研讀到在已經死亡的生物組織裡，還找得到的活的「邊緣」細胞，藉此思索在活的「主體」和死的「客體」之間的崩解。此外，她也深入調查從臨床死亡狀態存活過來的人的經驗。在一段令人發毛的影片中，我們看到一隻死雞以慢動作的速度落下著地，和在一個開刀房的重現場景中，一位有瀕死經驗者任由演員擺布。

最後，墨西哥藝術家塔妮婭·坎迪亞尼也是以飛翔的「鬼魅作用」為基礎，為本次在臺灣的展出創作新作〈維摩那〉。作品汲取印度和中國地區技術交換的史實為靈感，利用臺灣傳統飛行技術，創造一個印度神話中所記載不可能的飛翔奇景。《Vaimānika Śāstra》（意為航空科學，又稱 Vimanika、Vymanika、Vyamanika）是 20 世紀初期一本關於航空科技的梵文文書，書中聲稱古老梵文史詩中提到的「維摩那」，其實是先進的空氣動力飛行器——但這個主張的可信度衆議云云。在印度教的傳統信仰中，飛行維摩那的出現代表著吠陀諸神乘坐在御座、宮殿、飛行戰車上。這本 20 世紀初期由一位在邦加羅爾的工程師所寫的《Vaimānika Śāstra》，是一本關於航空學的專著，它啟發了坎迪亞尼去嘗試實現作者的想像，不管是否難以實行。

這項具實驗性的建造工程，最初是在印度科欽－穆茲里斯（該城市和古中國的關係密切）雙年展的平行展中呈現。當時藝術家與印度的學生合作，用竹子和椰棕繩為建材製作一個高高掛在展場空間中央的飛行室。坎迪亞尼為「萬無引力」在臺灣的展出，深入研究古老的建構技術，討論對抗重力的非科學方法，運用古老和在地的建構技術（風箏和天燈的製作技術），和臺灣工藝家合作，用藝術性的方式實現吠陀飛行的幻想。

如今，這個世界即將歷經第二次量子革命引起的諸多改變，和非局域性成真的可能性（臺灣處於量子計算的最前線），你我應重新思考《我們從未現代過》作者，身兼社會學家及哲學家的布魯諾·拉圖曾說過的：「世界並不是一塊堅牢的事實大地，上面只有幾面零零星星的不確定之湖；它是一片浩瀚無垠的不確定大海，其中僅有幾座斑斑點點的標準且固定形式的島嶼。」此展中的所有作品之間存在一個共同點：與我們的期待背道而馳的是，科學是對知識永無止盡的追求，有許多神秘未解之謎還在等待答案。

earth appears to ripple with seismic activity caused by volcanos. Likewise, Agnes Meyer-Brandis's *Hammer and Feather* experiment appears to replicate David Scott's experiment on the moon in the artist's studio. The legendary proof serves the artist as a metaphor for the inscrutability of reality and the obscurity of scientific research methods. It took a sharp-eyed scientist to point out the trick of making the hammer and feather fall at the same time in Earth's gravity at the exhibition's opening.

Equally spooky, but perhaps more in the comfort zone of science, are Evelina Domnitch and Dmitry Gelfand's *Force Field* and *Quantum Lattice*, where the artists actually manifest quantum entanglement behaviour in the gallery; investigating the subtle interactions between light, electro-dynamically levitated matter, and gravitational forces. While performative, these works are based on real science experiments and the public can physically experience the 'spooky action'.

Treading the thin line between belief and observed data is Sarah Sparkes, in *The GHost Formula*, investigating different ways of 'making' a ghost using a neuroscience experiment, and also creating portals that suggest spooky action at a distance (which also reference black holes), and the science fiction notion that these may one day be able to be used for interstellar travel. One theory that connects to this 'spooky action' is that ghosts could be a quantum 'leakage' from other universes. Using different means, Sarah Sparkes is collecting ghost stories from both Liverpool and Taiwan for her online project *The GHost Portal*. She works closely with anomalistic psychologist Professor Chris French and others who study ostensibly paranormal activity. She has never 'seen' a ghost and agrees with French when he says 'A fairly substantial minority of the population claim that they have personally experienced a ghost. For me, this can only mean one of two things. If ghosts really do exist, this has profound implications for our scientific understanding of our place in the universe and for the nature of consciousness. On the other hand, if, as I suspect, ghosts do not really exist, this can potentially tell us a lot about human psychology.' In Taiwan she has set up a 'ghost exchange' of money and paper objects given to appease ghosts during Taiwan's 'ghost month'.

Artist Nick Laessing has spent the last ten years travelling the world tracking down the mythologies of free energy, particularly the notion that one could run a car on water. In *Water Gas Car*, he has actually decided to try and build one, using all the available knowledge from his research. In the first version of "No Such Thing As Gravity", he drove his car, a stripped-out Volkswagen, to the gallery, using hydrolysed water for part of the time. He neither accepts, nor rejects the idea that the car might work.

Heirloom by Gina Czarnecki and John Hunt tested the limits of medical science and the possibility of using cell growth to recapture eternal youth. Looking at the potential impact of innovation on personal identity, and being able to 'make' ourselves, artist Czarnecki and scientist Hunt have created a living process of growth tissue, where delicate skin cells

frame portraits of Czarnecki's daughters. It imagines and offers a cultural laboratory for the future of the face. Seeing her daughters' faces in vitro we enter the 'uncanny valley' coined by anthropologists to describe the experience between the real and the nearly real.

The End is a Distant Memory by Helen Pynor explored the ambiguous borders between life and death at cellular and experiential levels. Working as artist in residence at the Max Planck Institute of Molecular Cell Biology and Genetics in Dresden during 2015, Pynor has studied 'marginal' cells that remain alive inside dead tissue, considering the implications of a breakdown between living 'subject' and dead 'object', and investigated the experiences of people who have survived clinical death. In a chilling video we see a dead chicken drop to the ground in slow motion and a near-death survivor being manipulated by actors in a re-creation of the operating theatre.

Finally, Mexican artist Tania Candiani created a new work for Taiwan, *Vimana* also based on a 'spooky action' form of flight, based on the historical transfer of technologies between India and the Chinese region. It uses Taiwanese traditional flying technology to create an Indian mythological phenomenon of impossible flight. The *Vaimānika Śāstra* or 'science of aeronautics' (sometimes also rendered Vimanika, Vymanika, Vyamanika) is an early 20th century text on aerospace technology that controversially made the claim that the vīmānas mentioned in ancient Sanskrit epics were actually advanced aerodynamic flying vehicles. In the Hindu tradition, flying vimanas have appeared in representations of different gods, on thrones, palaces and flying carriages. The *Vaimanika Sastra*, written in the early 20th century by an engineer in Bangalore is an entire treatise on aeronautics, which, however unfeasible, have inspired Candiani to try and create what was in the writer's imagination.

The project was initially an experimental construction with Indian students during a collateral exhibition at the Kochi Biennale, India (a city with many links to ancient China), built in bamboo and coconut rope, and raised in the middle of the exhibition space as a flying chapel. In "No Such Thing As Gravity" in Taiwan, Candiani explored ancient technologies of construction, addressing non-scientific approaches to defeat gravity, using ancient and local technologies for construction (kite and flying lantern construction techniques), working with Taiwanese artisans, to make real artistically the fantasy of vedic flight.

Now, in a world about to undergo changes wrought by the second quantum revolution and the possibilities of non-locality becoming real, (Taiwan is at the forefront of quantum computing), we should recall Bruno Latour, sociologist and philosopher, and author of *We Have Never Been Modern* when he said: 'The world is not a solid continent of facts sprinkled by a few lakes of uncertainties, but a vast ocean of uncertainties speckled by a few islands of calibrated and stabilized forms.' What all these works have in common is that contrary to our expectations, science is a continuing quest for knowledge and that there are many unanswered mysteries to be resolved.

參展藝術家作品介紹與圖版
Artists' Statements and Plates

塔妮婭·坎迪亞尼

Tania Candiani

〈給飛翔貝尼埃的機器 1673〉

塔妮婭·坎迪亞尼的創作所關心的是存在於科學與科技之間的種種分歧，以及在略微不同的情況下，這些領域出現平行存在的可能性：她的作品試圖想像出從未被充分實現或發展的發明、從未被執行的實驗、從未被探索的新發現…。

〈給飛翔貝尼埃的機器 1673〉是以具開創性的反重力裝置為發想點：那些在當時仍過於先進的非凡發明，以及能實現飛行夢的工藝品，同時挑戰了重力和人的身體。該計畫的主軸延續了坎迪亞尼重新詮釋過去想法的概念，也受到她在消失的魔法時刻和技術上，深入且饒富詩意的研究所驅動，重新打造了當時沒有達成初始設計目標的裝置，並在微重力的環境下，確保成功實現的可能性。藝術家認為，當初這些想法被提出時，或許是被放在錯誤的重力環境下進行測試。

藝術家在那姆·曼特拉及阿雷德拉朋地於星城（俄羅斯）策畫的「關於重力」，墨西哥藝術家聯展中的零重力行動期間，終於讓貝尼埃的機器成功飛行。

Machine For Flying Besnier 1673

In her work, Tania Candiani is concerned with the forking paths within science and technology, and the possibilities for parallel existences within these fields given slightly different conditions: her work imagines inventions which were never fully realised or developed, experiments which were never conducted, discoveries which were never made...

Machine for Flying Besnier 1673 is based on pioneering anti-gravitational devices; marvellous inventions that were ahead of their time, artefacts designed to make possible the dream of flying, challenging gravity and the human body itself. In-keeping with Candiani's repurposing of the past, fuelled by her intense and poetic research into those lost moments of magic and technology, this project consists of reconstructing devices which failed their original objectives, and in an environment of micro-gravity, grants them the possibility to be successful. The artist considers that perhaps at the time of their conception, they were simply tested in the wrong gravity.

Besnier's machine was finally made to fly by the artist during the Mexican zero gravity campaign at Star City for "Matters of Gravity", organised by Nahum Mantra and Ale De La Puente.



Photo credit: Maj Lindström

〈給飛翔貝尼埃的機器 1673〉，2015。單頻道錄像，有聲，1 分 03 秒；以魚線吊置懸掛的物件：木料、棉布、皮革、金屬配件。
Machine for Flying Besnier 1673, 2015. Single-channel video with sound, 1 minute 3 seconds; object hanging from ceiling with fishing cable: wood, cotton fabric, leather



〈給飛翔貝尼埃的機器 1673〉，2015。單頻道錄像，有聲，1 分 03 秒；以魚線吊置懸掛的物件：木料、棉布、皮革、金屬配件。
Machine for Flying Besnier 1673, 2015. Single-channel video with sound, 1 minute 3 seconds; object hanging from ceiling with fishing cable: wood, cotton fabric, leather and metal accessories.

〈維摩那〉

此作品的靈感源於印度與中國地區技術交換的史實，並利用臺灣傳統飛行科技重現一則印度神話。

藝術家受到二十世紀早期有關航空科學的印度文獻《Vaimanika Shastra》中所提到的飛行器維摩那（Vimana）啓發，將撰文者超現實的想像重現。書中提出具爭議卻又引人入勝的觀點，聲稱古老梵文史詩中的維摩那是高科技的飛行器，它被描述為一架雙層圓形飛行器，有著舷窗與圓頂，外型與一般對於飛碟的想像十分類似。它以「風的速度飛行，並且發出悠揚的聲響」。

參考這些文字敘述以及相關主要圖說，並聘請一位臺灣紙燈籠師傅製作出等比例模型。

透過攝影鏡頭，〈維摩那〉在影片中展開一趟沉思之旅，飛越不同的景觀，呈現出一段寓言故事或對古代傳說的敘述。

Vimana

This work is based on the historical transfer of technologies between India and the Chinese region. It uses Taiwanese traditional flying technology to recreate an Indian mythological phenomenon.

The *Vaimanika Shastra* on the topic of Vimanas or 'science of aeronautics', is an early 20th century Indian text on aerospace technology which, however unfeasible, inspired the artist to recreate what was in the writer's imagination. It makes the controversial but fascinating claim that the Vimanas mentioned in ancient Sanskrit epics were advanced aerodynamic flying vehicles, described as a double-decker, circular aircraft with portholes and a dome, much as we would imagine a flying saucer. It flew with the 'speed of the wind and gave forth a melodious sound'.

These literary descriptions - and mostly the drawing plates - were used for reference in the construction of a scale model manufactured by a Taiwanese paper lantern craftsman.

In the video piece, the camera accompanies the *Vimana* scale model in a contemplative way, flying through different landscapes, creating a narrative of a fable or an ancient legend.



RCDesign

〈維摩那〉，2017。單頻道錄像，4 分鐘。
Vimana, 2017. Single-channel video, 4 minutes.

陳滢如
Yin-Ju Chen

愛因斯坦稱量子糾纏為「鬼魅似的遠距作用」，這樣的觀點深深啓發了臺灣藝術家陳滢如。〈超距作用〉從科學的哲學觀出發，探討交互作用和密不可分之關聯是如何跨越極大的距離，並穿越無法想像的時間軸。

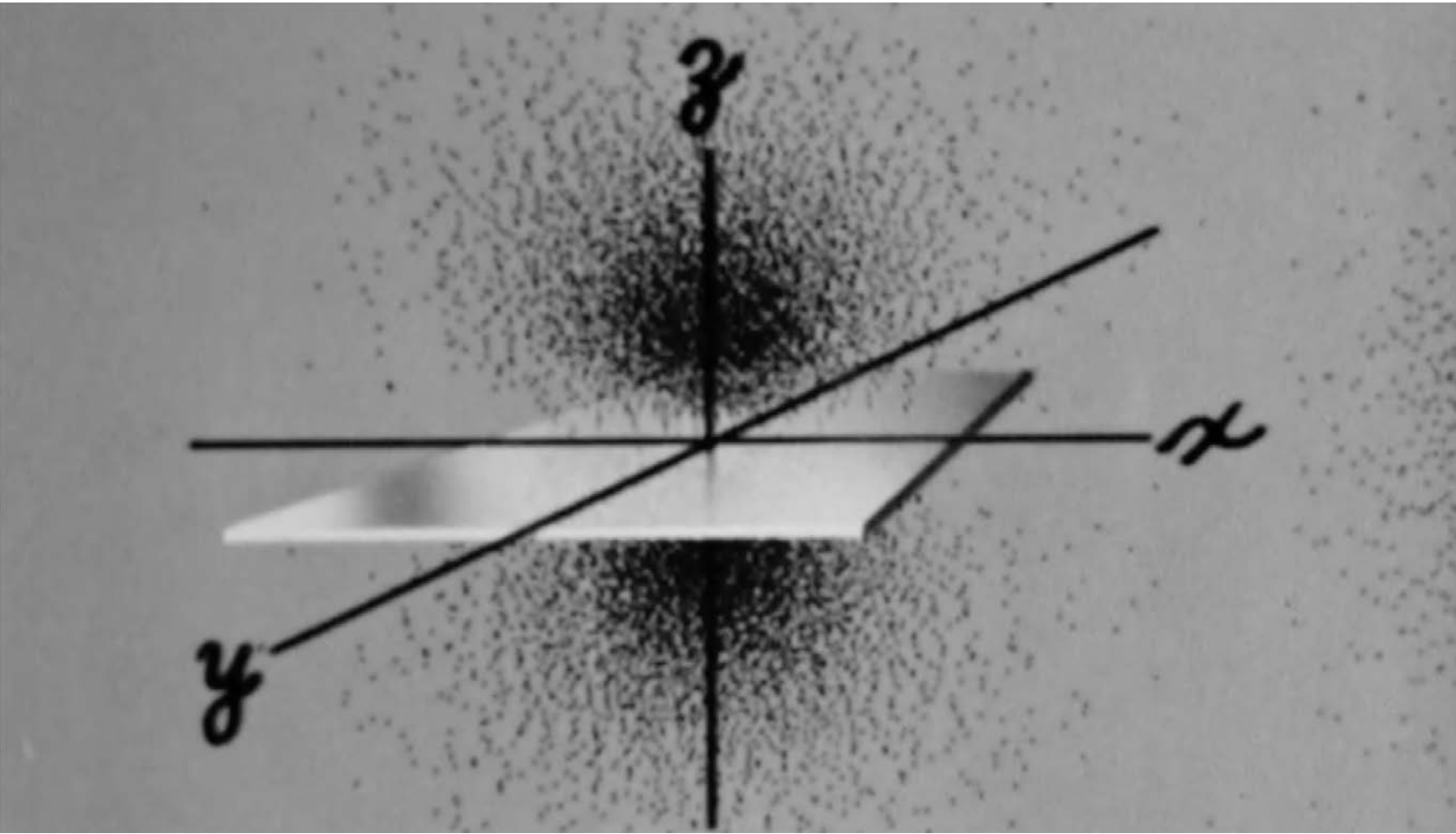
這件裝置作品是藝術家探討身體、政體、國家暴力系列作品中的第三章節，深入檢視侵入性手術和國家暴行實例之間的抽象連結，並試圖提出總結。

〈超距作用〉在（透露著有形與無形暴力史的）資料影片與模擬宇宙之間順暢地交移，並結合有關人之本性的哲學文本，表述一個完整且密切關聯的宇宙，在這裡，科學和偽科學終究都只是用來了解人類生命乃殊途而同歸的方式。

Einstein called quantum entanglement 'spooky action at a distance', Taiwanese artist Yin-Ju Chen is inspired by the pioneering genius' views on quantum physics. *Action at a Distance* explores the philosophical consequences of entanglement and this idea of unbreakable connections which develop across massive distances and through unthinkable expanses of time.

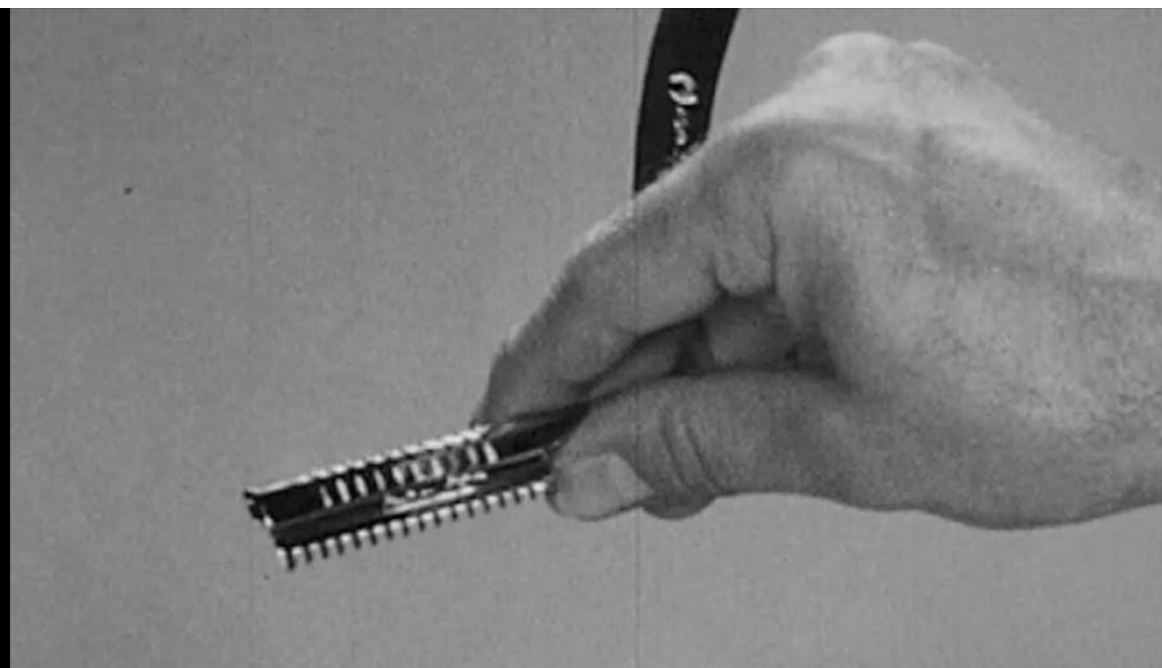
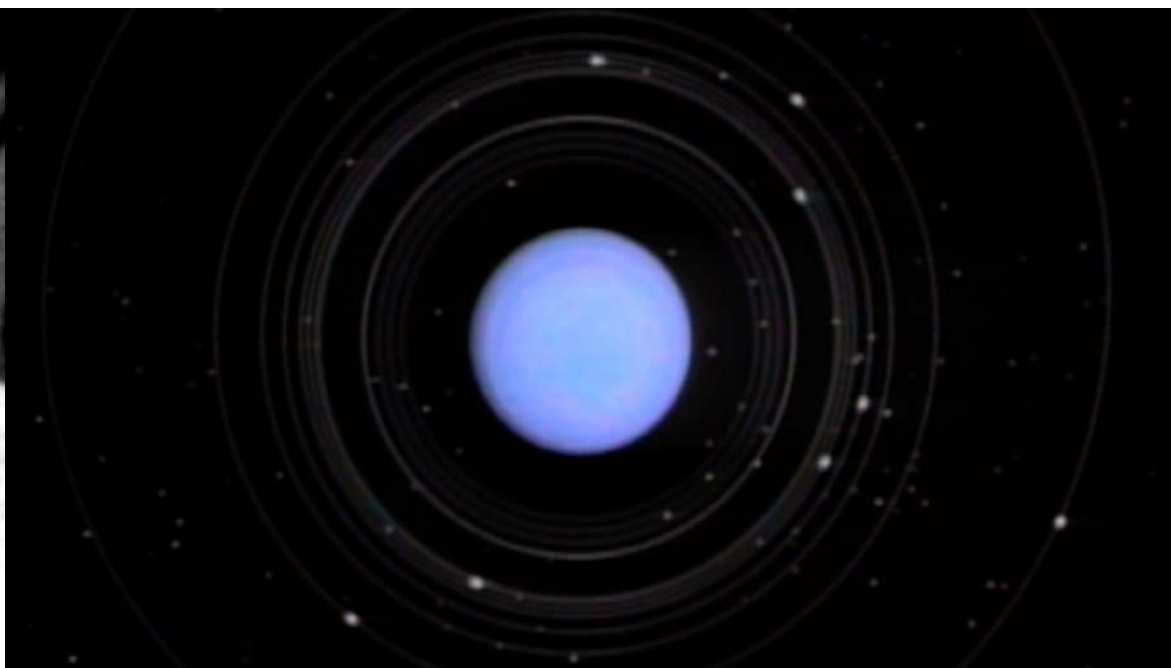
The third chapter in a series of works addressing the body, governments, and state violence, this installation expands and summarizes the metaphysical threads between invasive surgeries and instances of national brutality.

Moving seamlessly from archival footage (marked with both visible and invisible histories of violence) to simulations of the universe and incorporating philosophical texts about the nature of man, *Action at a Distance* describes a cohesive and interwoven universe where science and pseudoscience are merely two complementary routes to understanding human life.



量子力學
Quantum physics

〈超距作用〉，2015。三頻道錄像裝置，有聲，9 分 16 秒；卡典西德牆面文字。作品圖片提供：陳滢如 / Chi-Wen Gallery。
Action at a Distance, 2015. Three-channel video with sound, 9 minutes 16 seconds; vinyl texts. Courtesy of Yin-Ju Chen / Chi-Wen Gallery.



吉娜·扎奈齊 & 約翰·杭特
Gina Czarnecki & John Hunt

藝術家吉娜·扎奈齊和科學家約翰·杭特共同合作的〈傳家珍寶〉，藉扎奈齊女兒們的皮膚細胞面膜，誘使我們去思考一個無法實現的「青春永駐仙丹」，或是「睡美人」的概念。這些面膜是用 2014 年從札奈齊女兒們的口內所採樣的單一細胞加以培養，它們被放在活的羊水液中，並利用「死亡面具」的概念，在以女兒們的臉型製成的玻璃模具上成長，用維生系統提供實驗室外的細胞最佳的成長環境。在這個過程中，一個「傳家珍寶」被創造出來了：這是一個活的物體，它捕捉了個體存在之本質。

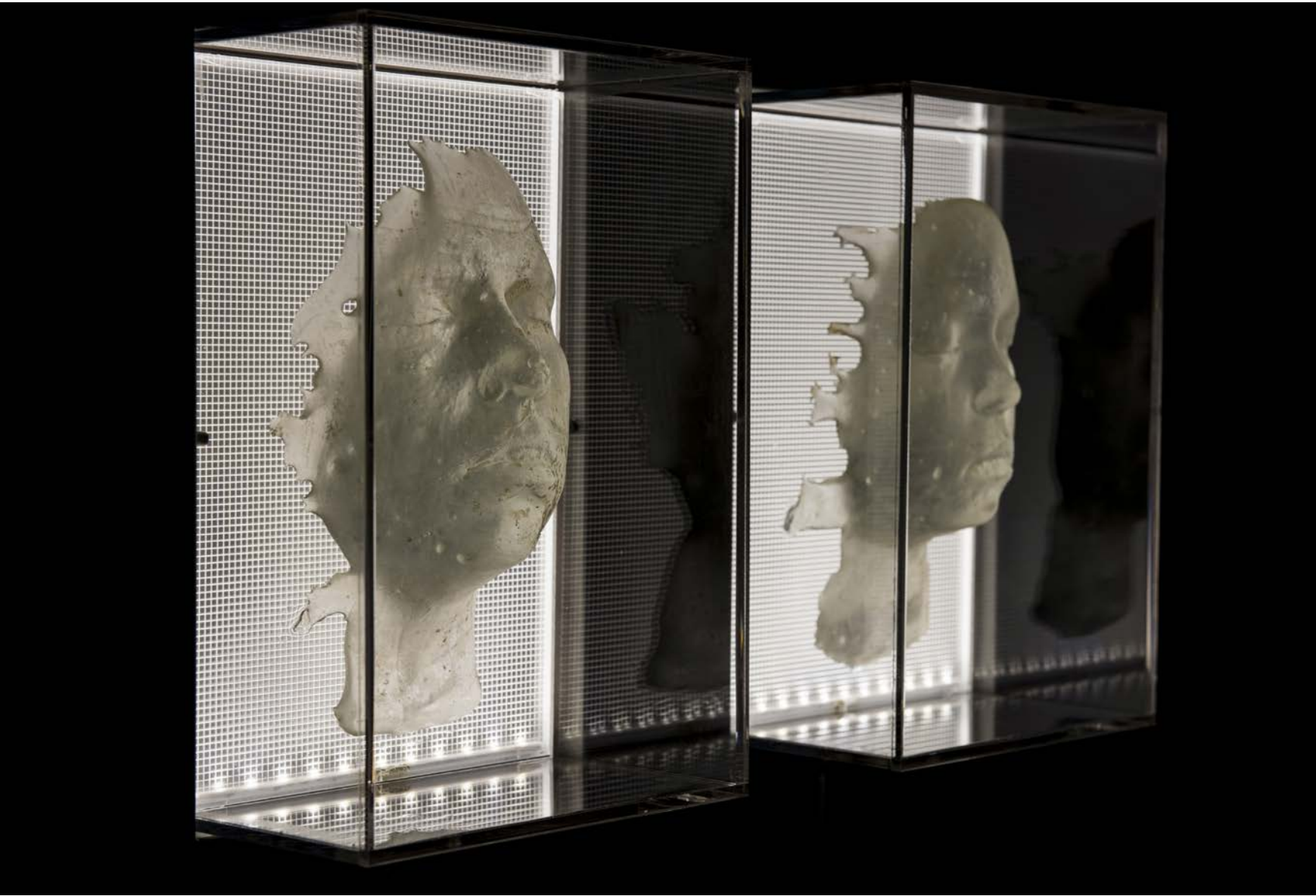
此裝置作品簡略呈現出這項由藝術家與科學家持續進行的長期合作計畫，展出物件呈現出〈傳家珍寶〉背後的執行過程，而這個過程有可能會繼續發展成未來的醫療處理程序，或甚至開發成用來捕捉生命的自製技術。

〈傳家珍寶〉是由吉娜·扎奈齊和約翰·杭特（利物浦大學老齡化與慢性病研究所）共同創作，參與者為薩絲奇亞·扎奈齊－史塔伯斯和蘿拉·扎奈齊－史塔伯斯，並由英格蘭藝術理事會提供之公部門資金贊助製作。〈傳家珍寶〉是 Forma Arts 策劃的巡迴製作計畫。

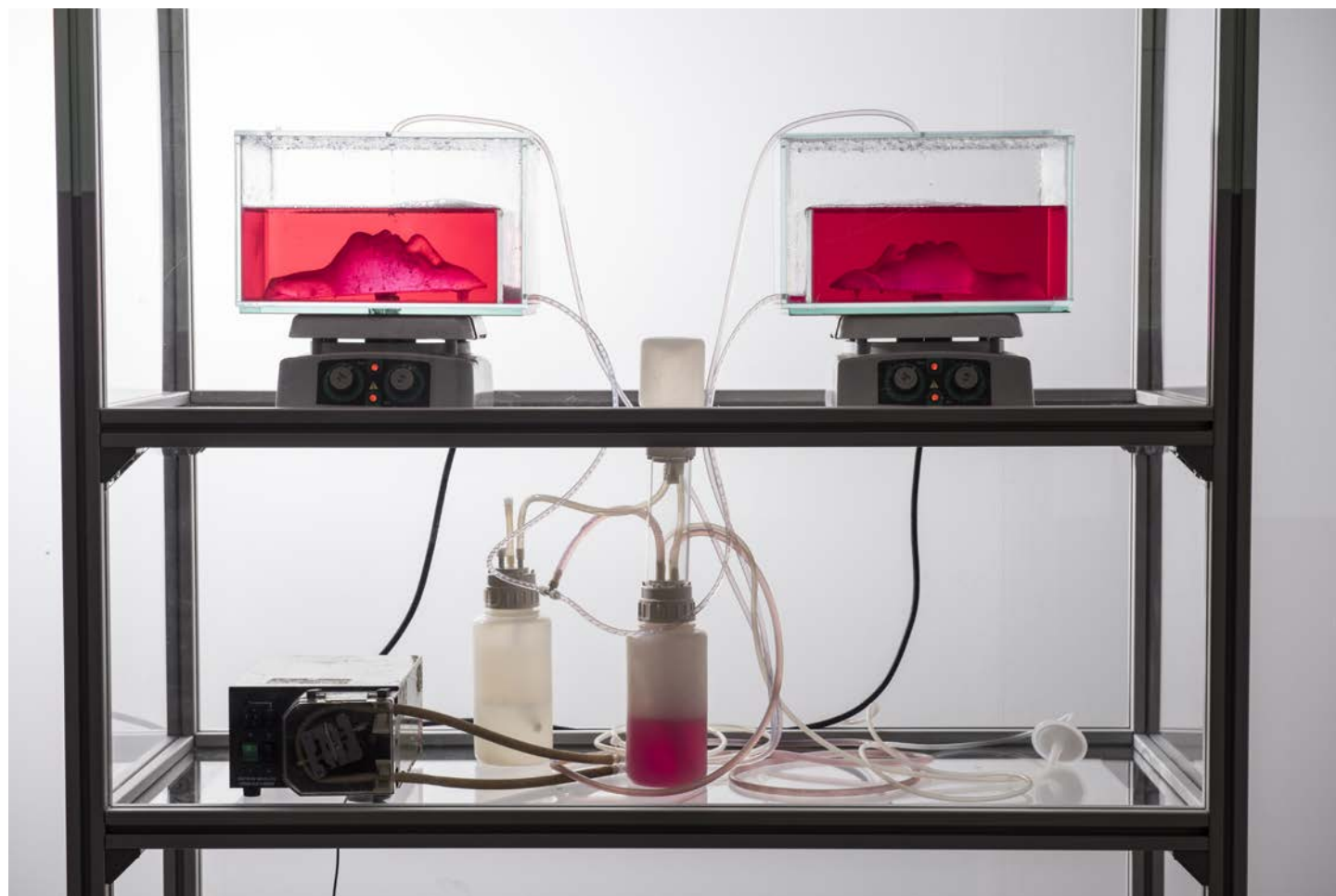
In *Heirloom*, artist Gina Czarnecki and scientist John Hunt evoke notions of an unachievable ‘elixir of youth’, or that of ‘sleeping beauty’, in the skin-cell masks of Czarnecki’s daughters’ faces. Cultured from a single sample taken from their mouths in 2014 and animated by a ‘mortuary-mask’ in a living, amniotic liquid, they grow on delicate glass casts of the girls’ faces in a life support system that provides the best conditions for growth, outside of a lab. In this process, an ‘Heirloom’ is created: a living object, which captures the essence of an individual’s existence.

This installation is a snapshot of an ongoing collaboration between artist and scientist. The exhibits here reveal the process behind *Heirloom*, a process that could develop into future medical procedures or even DIY techniques for capturing life.

Heirloom is created by Gina Czarnecki and John Hunt (Institute of Aging and Chronic Disease, University of Liverpool), with Saskia and Lola Czarnecki-Stubbs, and is supported using public funding by Arts Council England. *Heirloom* is a Forma Arts touring production.



〈傳家珍寶〉，2016。有科學儀器和訂製物件的裝置環境：單頻道投影，有聲，2分25秒；單頻道紀錄影片，有聲，15分02秒。
Heirloom, 2016. Installation environment with scientific apparatus and custom objects; single-channel projection with sound, 2 minutes 25 seconds; single-channel documentary film with sound, 15 minutes 2 seconds.



〈傳家珍寶〉，2016。有科學儀器和訂製物件的裝置環境；單頻道投影，有聲，2分25秒；單頻道紀錄影片，有聲，15分02秒。
Heirloom, 2016. Installation environment with scientific apparatus and custom objects; single-channel projection with sound, 2 minutes 25 seconds; single-channel documentary film with sound, 15 minutes 2 seconds.

伊芙莉娜·多明尼奇 & 狄米區·傑爾方德
Evelina Domnitch & Dmitry Gelfand

伊芙莉娜·多明尼奇和狄米區·傑爾方德和量子科學家及工程師共同合作，創作出真實且具體存在於宇宙中，卻又神祕難解的作品。他們將認知的本質質疑為一種前後一致、不可分割的整體概念，傾向去深入了解關於糾纏和非地方性的其他斜派理論。通過這種手法，他們所創作出的實驗，既凸顯了通常不被看見的事物，也製造出新的（更令人驚訝的）提問。

多明尼奇及傑爾方德的裝置作品所展示的現象，是直接發生在觀者眼前的，中間並未經過任何其他因素影響，因此這些現象經常會把觀者所習慣的感官極限再加以擴展。這種經驗所產生的立即效應，會讓觀者能夠超越存在科學發現和知覺擴大之間假想出的差異。

這兩位藝術家為「萬無引力」創作了一件以離子阱為發想的新作〈量子晶格〉。

在二十世紀即將結束前，囚禁離子方面的實驗讓物理學家能夠針對單一、隔離原子的量子行為，進行史無前例的深入研究。三十年後，離子阱已經成為粒子物理學和量子計算領域的重要儀器，是獲取及儲存反物質的唯一工具。

〈量子晶格〉探索介於光、囚禁離子、電場、重力之間隱微的交互作用。一幅大型雷射投影顯示出離子的持續振盪、渦旋式運動，和庫倫的晶體結構，呈現原本肉眼看不見的粒子行為。

〈量子晶格〉是在未來藝術發展與科技駐村計畫（Future Emerging Art and Technology，簡稱 FEAT）期間與里德堡原子量子模擬器（Rydberg Atom Quantum Simulator，簡稱 RySQ）共同合作的全新創作，並曾與歐洲核子研究組織（European Organization for Nuclear Research，簡稱 CERN）合作。兩位藝術家並在利物浦大學物理系的支援下，於 CERN 進行了駐村研究計畫。

Evelina Domnitch and Dmitry Gelfand work with quantum scientists and engineers to create works that very physically exist in the universe but are just as mysterious. They question the nature of perception as a coherent, indivisible whole, preferring to explore oblique theories of entanglement and nonlocality. In doing so, they create experiments which both highlight that which is usually unseen, and create new (more surprising) questions.

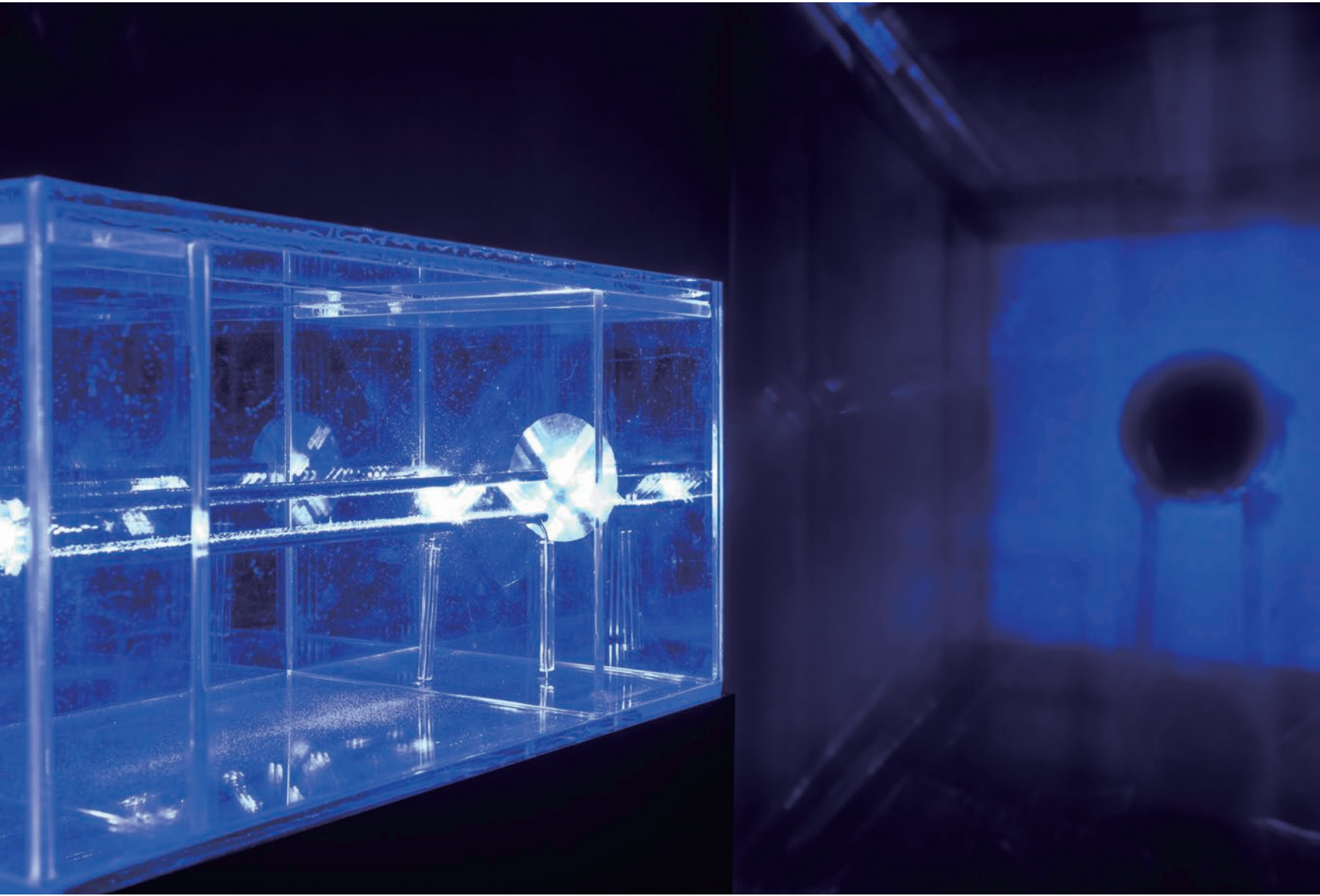
Because the phenomena displayed in Domnitch and Gelfand's installations takes place directly in front of the observer without being mediated, they often serve to vastly extend the observer's usual sensory limitations. The immediacy of this experience allows the observer to transcend the illusory distinction between scientific discovery and perceptual expansion.

For “No Such Thing As Gravity”, the artists present a new work based on experiments with an Ion Trap, *Quantum Lattice*.

At the end of the 20th century, experiments with trapped ions enabled physicists to investigate the quantum behavior of single, isolated atoms for the very first time. Thirty years later, the ion trap has become a key instrument in particle physics and quantum computing, and provides the only means to capture and store antimatter.

Quantum Lattice, probes the subtle interactions between light, trapped ions, electric fields, and gravitational forces. A large-scale laser projection magnifies the ions' ceaseless oscillations, vortical motion and coulomb crystal formation, making visible the otherwise undetectable behaviours of particles.

Quantum Lattice was created in collaboration with RySQ (Rydberg Atom Quantum Simulator) as part of a FEAT residency (Future Emerging Art and Technology). This new work has been produced in collaboration with CERN, where the artists conducted a research residency, supported by the Department of Physics at University of Liverpool.



〈量子晶格〉，2016。離子阱、藍光雷射、中空玻璃微球、石松子。
Quantum Lattice, 2016. Ion trap, blue laser, hollow glass microspheres, lycopodium spores.

尼克·雷辛

Nick Laessing

和正統的科學研究最沾不著邊的是尼克·雷辛的作品。為了探討未經證實的科學現象，他多方拜訪在自由能領域的後院科學家（譯註），研究與此相關的工程實驗，作為創作的依據。〈水煤氣車〉研究利用「水氣」的可能性。這種能源在十九世紀問世，卻直到近年因實驗家積極尋找無汙染能源，才引起較多的關注。坊間流傳著許多關於這種氣體的不實故事，例如有些主張宣稱在二十世紀前半葉，和第二次世界大戰時期燃料短缺期間，都曾使用水氣。1990 年代的發明家史丹利·邁耶也聲稱曾靠水燃料來開車。

2013 年一月，尼克·雷辛和英國工程師吉米·惠特摩合作改裝一台 1998 年的福斯 Golf 汽車，並駕著這台水燃料汽車，從位於阿姆斯特丹的工作室開到日內瓦。這台車之後還有陸續被調整改裝，並成功地以水為燃料來運作。

為了研究自由能源、冷核融合、推進力新形式等方面的理論，雷辛前後花了十年時間造訪這類後院發明家，試圖打造一台以水為單一能源的汽車。他用藝術家的思維面對這件作品，既不接受也不排斥他的實驗會成功的可能性。他目前正於倫敦大學學院與氫氣專家從事研究工作。

本作品由工程師吉米·惠特摩協助製作開發。

譯註：後院科學家（backyard scientist）是指把科學理論從實驗室帶到真實世界的實驗家。

At the further reaches of less conventional science lies the work of Nick Laessing, who explores unproven scientific phenomenon, based on his research visits to backyard scientists and engineering experiments in free energy. *Water Gas Car* considers the possibility for the use of 'Water gas'. First discovered in the 19th century, it has more recently attracted the attention of experimenters searching for a pollution-free fuel. Many apocryphal stories surround this gas, such as claims that it was used in the first decades of the 20th century and during the Second World War during fuel shortages. In the 1990's the inventor Stanley Meyer claimed to have run a car on water.

In January 2013, together with Jimmy Whitmore, an engineer from the UK, Nick Laessing attempted to adapt a 1998 VW Golf car to run on water and to drive it from his studio in Amsterdam to Geneva. This car has since been further adapted and has successfully run on water

Investigating theories about free energy, cold fusion and new forms of propulsion, Laessing has spent a decade visiting some of these backyard inventors, and is attempting to build a car that is fuelled only by water. He is approaching this work as an artist, neither accepting nor rejecting the idea that his experiments might work. He is currently undertaking research with hydrogen specialists at UCL in London.

Developed with the support of engineer Jimmy Whitmore.



〈水煤氣車〉，2013 至今。改裝的福斯 Golf 車款汽車、水、電解槽、太陽能板、氣膜、氫、單頻道錄像。
Water Gas Car, 2013-present. Modified Volkswagen Golf, water, electrolyser, solar panels, gas membrane, hydrogen, single-channel video.



〈水煤氣車〉，2013 至今。改裝的福斯 Golf 車款汽車、水、電解槽、太陽能板、氣膜、氫、單頻道錄像。
Water Gas Car, 2013-present. Modified Volkswagen Golf, water, electrolyser, solar panels, gas membrane, hydrogen,
 single-channel video.

那姆·曼特拉
Nahum Mantra

〈關鍵魔術〉是由藝術家那姆·曼特拉發展出的概念，運用魔術的效果來處理存在當今世界的關鍵議題。這件持續進行中的計畫及研究深入探索社會、政治、經濟模式在受到錯誤觀點的力量所左右的情勢中，如何創造全新且難以置信的假象，而用來營造這種經驗的手法包括消失、心靈魔術、懸浮、幻象等傳統伎倆。

根據尚·布希亞的論點，社會在接受一系列的模型之前，並未以充分的批判性，去分辨真與假的差別。我們走在一片沙漠中若遇到一道區隔兩地的牆，便會直接假設自己無法像鳥兒一樣飛越它。布希亞進一步提倡用政治行動和批判手法，去接近我們眼中看不見的現實。因為在這個現實裡，藉由一個巨大的幻影，並讓兩個國家之間的疆界消失，我們便能夠重新找到原始的風景，不用靠過去創造出的模型。此舉製造出的幻覺消除了另一個幻覺，還拋出一個提問：什麼才是真的？

Critical Magic is a concept developed by artist Nahum Mantra that consists of using magical effects to address critical issues. This ongoing project and research explores the possibilities of creating new and impossible imaginaries where social, political and economic models are challenged by the power of false perspectives. The strategies used for creating such events include traditional illusionism such as vanishings, mentalism, levitation, and apparitions amongst others.

According to Jean Baudrillard, societies have accepted a series of models without being critical enough to distinguish between what is real and what is false. When we walk along a desert and find a wall dividing territories we assume we cannot go beyond as birds do. Baudrillard continues to encourage political action and the use of critique to access the occult reality to our eyes. It is here, where by employing a grand illusion and vanishing a border between two countries, we could regain the pristine landscape without a model we have invented. This produces an illusion that deletes another illusion and questions: What is real?



美國 / 墨西哥 一項使牆面消失的練習
USA/Mexico An exercise to vanish the wall



揭示迷人之地
Exposing The Land of Enchantment

〈關鍵魔術〉，2017。錄像；紙張，尺寸不一。
Critical Magic, 2017. Video; paper works, variable dimensions.

安娜斯·邁爾－布蘭狄斯
Agnes Meyer-Brandis

〈應用落下之研究 / 榔頭和羽毛〉

安娜斯·邁爾－布蘭狄斯的作品看似是在重現 1971 年的阿波羅 15 號月球任務中，由大衛·史考特在月球上的無氣體環境中所做的有名實驗。在邁爾－布蘭狄斯眼中，這項實驗是可以挪用在藝術上的素材，亦是她那交織著科學、神話、童話故事的特殊敘事風格可以借用的完美題材。

此作中，邁爾－布蘭狄斯創造一個實驗室環境，重新演繹榔頭和羽毛的實驗（就像她大部分的作品一樣，此計畫也是用真實的科學實驗和論據為基礎，安插讓人無法察覺的詩性數據，再用趣味的手法加以處理）。關於游移於落下和漂浮的物體與現象，如落下的星星、外太空的碎片、星際塵埃、重力干擾、隕石坑等，已有許多眾所周知的研究，而本作即是一例。

本計畫是與德國布倫瑞克工業大學的地球物理和外星物理研究所 (Institute for Geophysics and Extraterrestrial Physics，簡稱 IGEP) 共同合作。

Studies in Applied Falling / Hammer and Feather

Agnes Meyer-Brandis' work appears to recreate the famous experiment by David Scott in the airless environment of the Moon, on the Apollo 15 lunar mission in 1971. She sees Scott's experiment as an artistic directive and perfect material for her particular kind of storytelling, which is interwoven with science, myth and fairytale.

Meyer-Brandis' laboratory re-enactment of the hammer and feather experiment (which, as so much of her work, takes real scientific experiments and facts, and inserts poetic data and playful manipulations that are undetectable) is just one of numerous apparent studies of objects and phenomena that oscillate between falling and floating: fallen stars, space debris, interstellar dust, gravitational interference and meteor craters.

Realized in cooperation with the Institute for Geophysics and Extraterrestrial Physics (IGEP) of the TU Braunschweig.



Studies in Applied Falling, Logo © Agnes Meyer-Brandis, VG-Bildkunst 2017



Hammer and Feather, Studies in Applied Falling, Zabriskie Point, CA-10 © 2010 Agnes Meyer-Brandis, VG-Bildkunst 2017



Hammer and Feather, Studies in Applied Falling, Cinder Lakes, AR-10 © 2010 Agnes Meyer-Brandis, VG-Bildkunst 2017

〈月鵝殖民地〉

安娜斯·邁爾－布蘭狄斯的研究計畫既富詩學的浪漫意境，又具科學的嚴謹態度，事實、想像、故事和神話、過去、現在、未來全都在她的作品中重疊交織。她豢養的 11 隻「月鵝」像弗朗西斯·戈德溫在最早的科幻小說《月亮上的人》中所預示的一樣，拉著一輛戰車移居到月球去了。安娜斯的鵝是現實生活中真正存在的鵝，牠們被養在義大利波羅那里亞這處模擬月球環境的偏遠訓練基地——月鵝殖民地。

模擬營是為了沙盤推演在外太空的生活。全球各地有許多設在偏遠地區的訓練基地，讓太空人可以練習如何應付人類在地球以外的環境生活時，在心理上會遇到的難題與困境。

The Moon Goose Colony

Agnes Meyer-Brandis's poetic-scientific investigations weave fact, imagination, storytelling and myth, past, present and future. She has bred eleven 'moon geese' who, as predicted by Francis Godwin in the earliest science fiction novel *The Man in the Moone*, migrate to the Moon towing a chariot. Agnes's geese are real birds that live in a lunar analogue in a remote facility - Moon Goose Colony - at Pollinaria, Italy.

An analogue is a rehearsal for living in space. At various remote facilities around the world astronauts are practicing for the psychological challenges humans face living away from Earth.



MOBILE MOON, Astronaut Training Method No. V, Moon Goose Colony, photograph © Agnes Meyer-Brandis, VG-Bildkunst 2017

〈月鵝殖民地〉，2011-2012。高畫質錄像，20 分 56 秒。

The Moon Goose Colony, 2011-2012. HD Pal, 20 minutes 56 seconds.



The Moon Goose Colony, Videostill © Agnes Meyer-Brandis, VG-Bildkunst 2017

〈月鵝殖民地〉，2011-2012。高畫質錄像，20 分 56 秒。

The Moon Goose Colony, 2011-2012. HD Pal, 20 minutes 56 seconds.

遠房親戚實驗室（曹存慧、葛昌惠、吳牧青）

Lab of the Distant Relatives (Theresa Tsun-Hui Tsao, Chang-Huei Ge, Mu-Ching Wu)

「一位聽見懺悔的神父因隔欄而與那進行懺悔的人分離；他看不見他，他僅僅在聽。在他傾聽時，逐漸形成了一幅與他聽見的相吻合的另一人外表的圖像；因而他沒有發現任何矛盾。」 — 齊克果《非此即彼》。

「有我在™」，基因轉殖的結晶，是生物科技人性化的最前沿，出現在當代這個無所不販的物質界。有我在，作為客戶最信賴的協作夥伴：樣本收集，序列放大；客製服務，永續生存；穩定繁殖，長期儲存；最初的愛，無限增殖；天地之塞，民胞物與。

轉殖後的你，DNA 都有著「素質上的無限相同」(infinite qualitative equal)，你再也不必擔心天擇的無常、人擇的失誤、遺傳的不完美、基因的突變，轉殖的世界更存在著超越時間序列邏輯，超越任何失去自我的絕望，將本我、自我、超我三位人格合為一體。

承蒙「遠房親戚實驗室」（甲方）的優質合作客戶「國立臺灣美術館」（乙方）之邀約，特別在當今坊間劣質克隆（clone）衍生諸多糾紛的世道，或是民間訴諸怪力的分身副本故事橫陳的環境下，以一種平易近人的店頭展示，娓娓道來「有我在生物科技股份有限公司」與他們信賴的生命夥伴們，給了獨一無二「凡世，我在」的宇宙禮物。

'A priest who hears confessions is separated by a grillwork from the person making confession; he does not see him, he only hears. As he listens, he gradually forms a picture of the other's outward appearance corresponding to what he hears; thus he finds no contradiction.' - Kierkegaard, *Either/Or*.

HEREiAM™ is the creation of genetic engineering, a pioneer of human sensual biotechnology. It comes up at this moment in a material world where everything is up for sale. HEREiAM™ is its clients' most reliable partner. Form sample collection, DNA amplification, customized transformation, and immortalization, the company provides steady procreation and long-term storage of lives. It assists you to fill the universe with identical affection, proliferating your first love infinitely.

Once you are transformed into another life, your DNA will be 'infinite qualitatively equal'. You will never need to worry about the impermanence of natural selections, mistakes of anthropic decisions, hereditary imperfections, nor genetic mutations. The transgenic world even embodies a logic that transcends temporal order, surpassing any despair that may come from the sense of losing oneself. With HEREiAM™, you can unify the three parts of psyche, id, ego, and superego, into one.

Under the invitation to Lab of the Distant Relatives' (Party A) from our VIP collaborator, the National Taiwan Museum of Fine Arts (Party B), here we showcase a friendly, accessible store of our innovation. In this era of controversial clones and bizarre avatars, we display HEREiAM Biotechnology Co. Ltd. and its trusted life partner, HEREiAMTM - a unique, one-and-only gift to the universe which states, 'In this mortal world, here I am.'



有我在™ 使用者生活照（葛昌惠攝）
HEREiAM™ costumers (photo by Chang-Huei Ge)



上：有我在™ 產品發表與基因轉殖體驗會紀錄（葛昌惠攝）
 下：有我在™ 產品發表與基因轉殖體驗會紀錄（湯加碩攝）
 Above: HEREiAM™ product launch and genetic transformation workshop (photo by Chang-Huei Ge)
 Below: HEREiAM™ product launch and genetic transformation workshop (photo by Chia-Shuo Tang)



有我在™ 使用者生活照（葛昌惠攝）
 HEREiAM™ costumers (photo by Chang-Huei Ge)

海倫・皮諾
Helen Pynor

海倫・皮諾曾受過正統的藝術創作與科學研究訓練，作品無疑都是跨領域的合作，深刻探討模糊不明的區域與狀態，如生死交界和器官移植的人際性。

在作品〈終點是一個遙遠的記憶〉中，皮諾探索介於生與死之間的空間，其具體手法是透過檢視我們買來食用的肉品裡面所存在的活細胞。皮諾在德勒斯登的麥克斯普蘭喀研究所分子細胞生物學暨遺傳學學院時，便著手進行這件創作。她從超市買來的雞肉上取得組織切片後，成功用組織培養技術養出活的雞細胞：從本質上證明了活細胞可以在被認為已經死亡的生物上繼續存在。

〈終點是一個遙遠的記憶〉還進一步探討人類的瀕死經驗：臨床死亡狀態期間清醒意識的持續性。在近代，由於復甦技術不斷研發更新，讓我們能夠一步一步更深入地探勘過去被認為是醫學研究無法到達的領域，而有瀕死經驗的病患案例紀錄，也隨之持續增加。為了此作的這個部分，皮諾接觸了一些宣稱有這種經驗的人，也密切與他們合作。

在上述兩個部分中，皮諾都試圖讓軀體在作品裡重新有了生命：拍攝他們在不同狀態中的轉移變化，把超市買的雞肉擺出像人一樣的姿勢，採集死亡物質中存在的活細胞。這個重新創造出像有生命一般的動作——或活著的動作——的企圖，凸顯出「生」與「死」這兩種我們普遍認知為有限狀態之間的未知空間的複雜性。

本作品透過澳洲藝術理事會、其藝術基金及諮詢委員會取得澳洲政府的贊助。

Helen Pynor, formally trained as both an artist and scientist, has a truly cross-disciplinary collaborative practice, which explores ambiguous zones and states, such as the life-death border and the interpersonal nature of organ transplantation.

In her installation, *The End is a Distant Memory*, she explores the space between life and death, specifically through an examination of the presence of living cells inside the meat we purchase for food. This work began whilst Pynor was at The Max Planck Institute of Molecular Cell Biology and Genetics in Dresden, where she extracted and successfully tissue-cultured living chicken cells obtained from a biopsy of supermarket chicken meat: essentially demonstrating that living cells persist in something perceived to be dead.

This presentation of *The End is a Distant Memory* further explores human near-death experiences: the persistence of lucid consciousness during states of clinical death. This phenomenon is increasingly reported by patients in recent times, as new and emerging resuscitation technologies make it possible to reach further and further into an area previously regarded as beyond medical reach. For this part of the installation Pynor has worked closely with people who claim to have had such experiences.

In both parts of this piece, Pynor reanimates the bodies within the work: filming them transitioning between various states, posing supermarket chickens into human-like positions, and capturing the existence of living cells within deceased matter. This attempt at recreating life-like movement, or living moments, highlights the complexity of the unknown space between what we usually consider to be two finite states: alive, or dead.

Supported by the Australian Government through the Australia Council for the Arts, its arts funding and advisory body.



〈終點是一個遙遠的記憶〉，2016。六部單頻道錄像裝置，有聲，長度不一。攝影、物件。
The End is a Distant Memory, 2016. Installation with 6 single-channel videos with sound, various durations. Photography, objects.

共同研發之個人及所屬機構：

約亨·林克博士－德國德勒斯登市馬克斯·普朗克分子細胞生物學與遺傳學研究所

布麗塔·斯洛特－迪茲博士，揚·派塞爾博士－光顯微學中心，德國德勒斯登市馬克斯·普朗克分子細胞生物學與遺傳學研究所

聲音：

詹姆士·布朗

表演共同創作：

星雲支系

演出者：

亞歷翰卓·羅蘭迪
星雲支系（李·威爾森及蜜荷貝勒·沃特斯）
羅翰·湯瑪斯

策展顧問：

貝克·狄恩

技術製作：

克里斯提·斯巴塔羅
3.Etage Filmproduktion多媒體製作團隊（法蘭克·拜耶特里希、蘇珊娜·胡倫茲）
上松剛太郎
尚恩·卡瓦納
多明尼克·科克伍德
亞尼·克羅嫩堡
沃倫·麥克里斯
理查德·拉克斯頓
費歐娜·哈德森

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所有合作個人與單位、林克實驗室、光顯微學中心、德勒斯登市馬克斯·普朗克分子細胞生物學與遺傳學研究所所屬之媒體科技及外展團隊、克里斯提·柯爾斯、諾亞克先生、亞歷克斯·里德爾、尤爾根·耶艾柏曼、羅納德·薛莫、維多利亞·史賓斯、羅賓·奧爾德、尚－保·莫德。

大型直立玻璃作品上的文字節選自羅翰·湯瑪斯敘述其個人瀕死經驗的訪談內容。

在「鳥兒落下」情節中所用的鳥隻是自屠宰場取得的肉品加工副產品，並非於拍攝期間被宰殺。

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Sound:

James Brown

Performance Co-Creation:

Branch Nebula

Performers:

Alejandro Rolandi
Branch Nebula (Lee Wilson and Mirabelle Wouters)
Rohan Thomas

Curatorial advice:

Bec Dean

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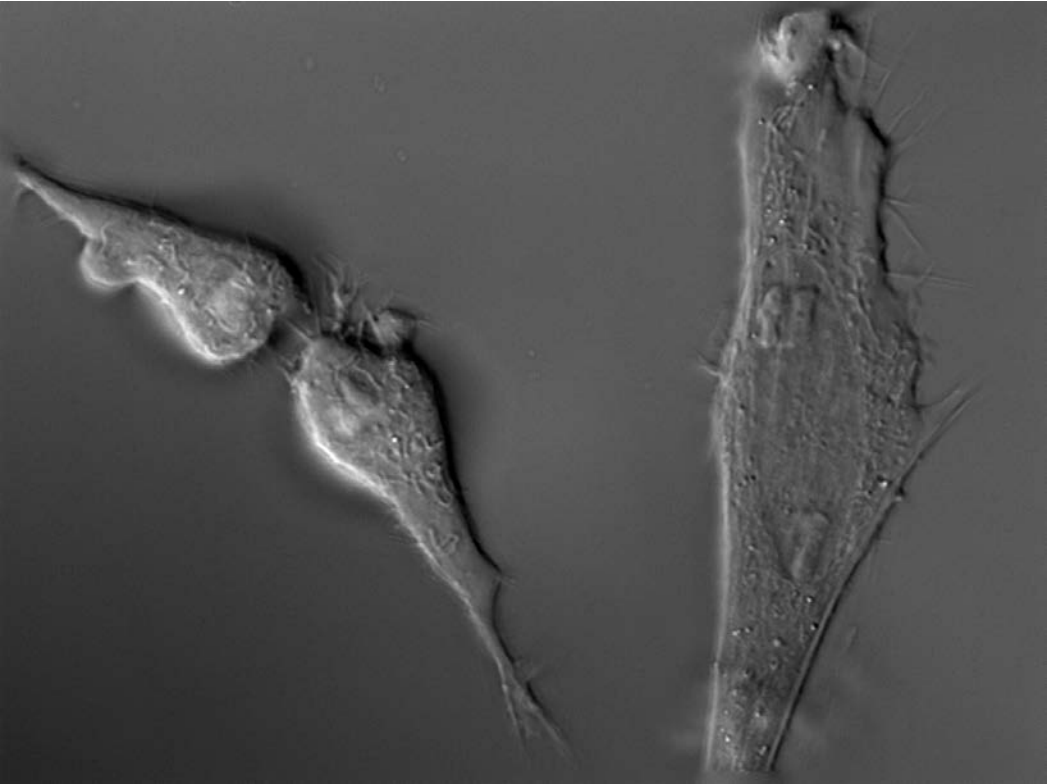
All collaborators and The Rink Lab, Light Microscopy Facility, and Media, Technology & Outreach at the Max Planck Institute of Molecular Cell Biology and Genetics, Dresden, Christian Cohrs, Herr Noack, Alex Riedel, Jürgen Jeibmann, Ronald Schemmel, Victoria Spence, Robin Auld and Jean-Paul Modde.

Texts on the large standing glass-work are extracts from an interview with Rohan Thomas exploring his personal experience of near-death.

Bird used in the‘falling bird’sequence was obtained from an abattoir as a by-product of meat processing and was not killed during the filming of this sequence.

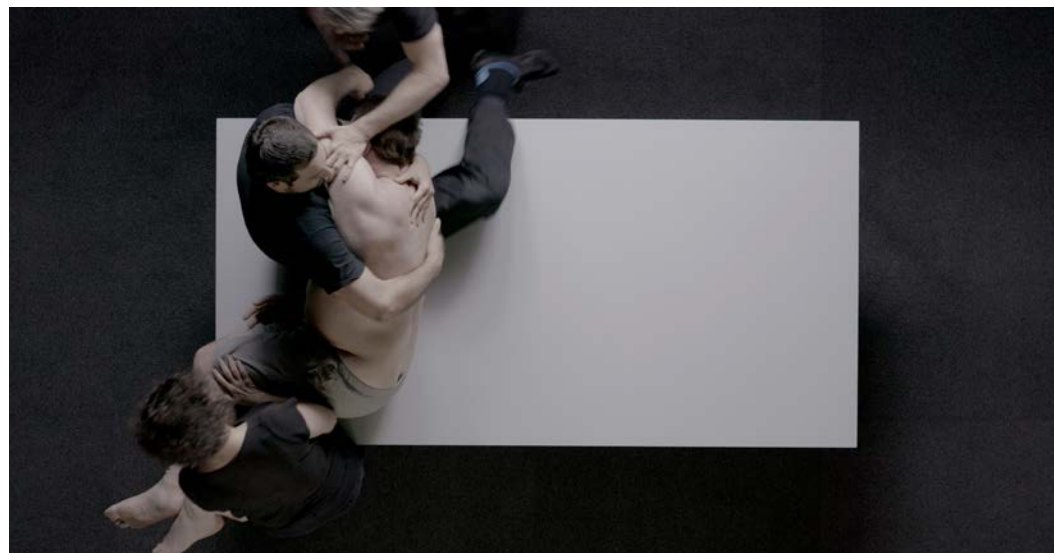
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K Seal Glass, Liverpool, UK



〈終點是一個遙遠的記憶〉，2016。六部單頻道錄像裝置，有聲，長度不一。攝影、物件。

The End is a Distant Memory, 2016. Installation with 6 single-channel videos with sound, various durations. Photography, objects.



〈終點是一個遙遠的記憶〉，2016。六部單頻道錄像裝置，有聲，長度不一。攝影、物件。
The End is a Distant Memory, 2016. Installation with 6 single-channel videos with sound, various durations. Photography, objects.

半導體
Semiconductor

〈多重世界形成中〉

〈多重世界形成中〉是件如敘事詩般的三頻道動態影像作品，探討我們如何觀察、體驗，和建構對周遭世界自然起源的理解。半導體藝術雙人組挪借火山學所用的器械和程序步驟，來重新詮釋我們這個火山行星的原始景觀，創造出稍微偏離人們習以為常的世界。

作品配上的音響效果，是用來研究我們和聲音的物理、科學、短暫性本質的關係。從火山底下收集到的地震數據轉化成聲音，創造出岩石在地表下推擠、輾磨的影像，並被當作一種塑型的工具，製作出物質形成礦物晶體的精緻電腦動畫。一名科學家的獨白引領觀者遊歷於一幕幕壯麗地景的同時，四周揚起歐倫·安巴奇的曲子也牽引出一股情緒的共鳴。

Worlds in the Making

Worlds in the Making is an epic three channel moving image work that explores how we observe, experience and create an understanding of the physical origins of the world around us. By appropriating the tools and processes of volcanology to re-interpret the primordial landscapes of our volcanic planet, Semiconductor create a world slightly removed from the one we think we know.

In the work the use of audio investigates our relationship with the physical, scientific and ephemeral nature of sound. Seismic data collected from beneath volcanoes and translated into audio evokes images of rocks crunching and grinding below the Earth and is used as a sculptural tool to generate elaborate CG animations of matter forming as mineral crystals. A scientist's dialogue appears to guide us through extraordinary landscapes while Oren Ambarchi's composition overwhelms as it brings an emotional connection to place.

〈磁力電影〉

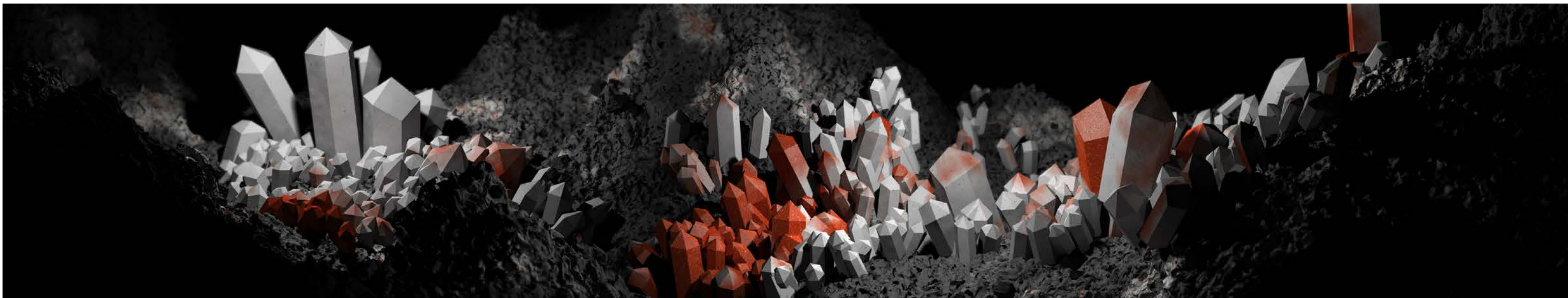
隱形的磁場化身為千變萬化的不規則幾何圖形。所有的行動於加州柏克萊大學美國太空總署太空實驗室執行，並且將太空科學家的新發現加以記錄。在聽力以外的範圍，運用超低頻接收器（VLF）錄音控制磁場變化，顯示出電流呼嘯而過的「哨聲」。究竟我們看的是一系列科學實驗、宇宙的波動，還是科幻世界紀錄片？

Magnetic Movie

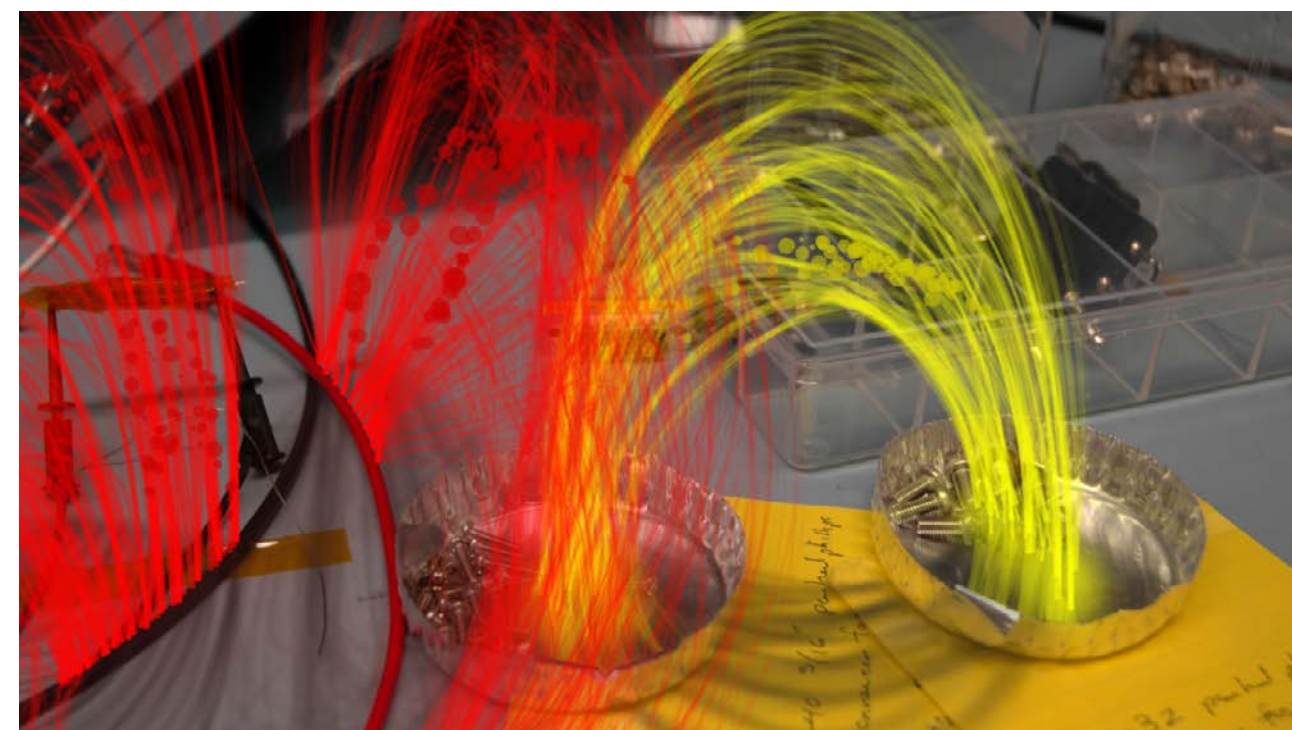
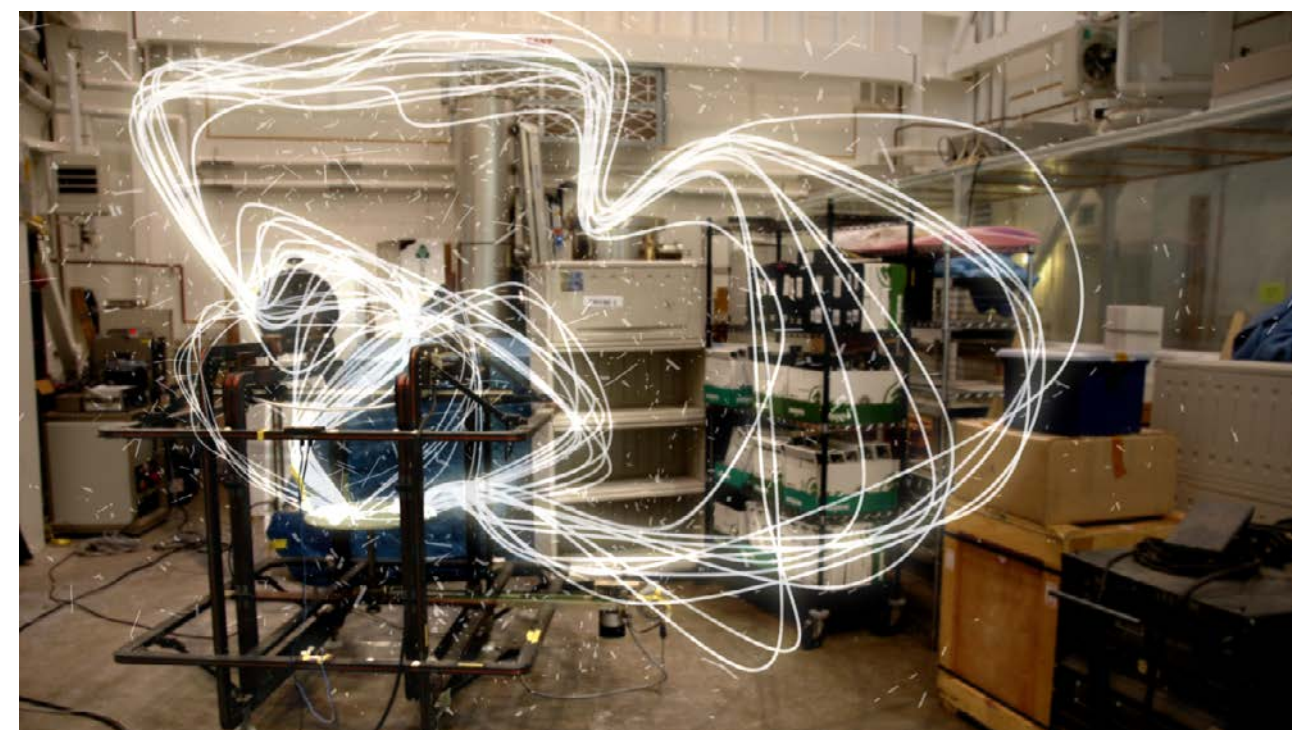
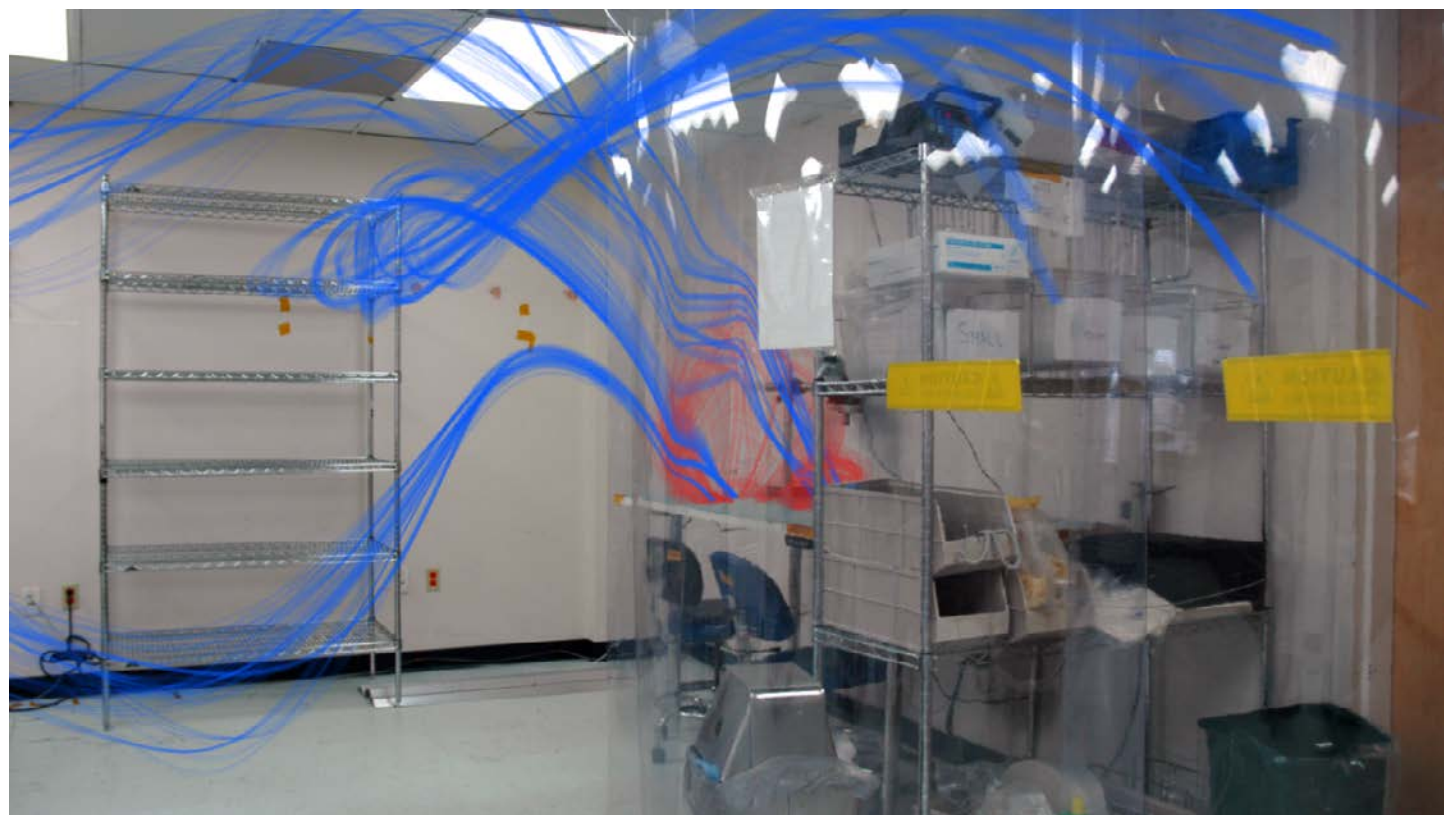
The secret lives of invisible magnetic fields are revealed as chaotic ever-changing geometries. All action takes place around NASA's Space Sciences Laboratories, UC Berkeley, to recordings of space scientists describing their discoveries. Actual VLF audio recordings control the evolution of the fields as they delve into our inaudible surroundings, revealing recurrent 'whistlers' produced by fleeting electrons. Are we observing a series of scientific experiments, the universe in flux, or a documentary of a fictional world?



〈多重世界形成中〉，2011。高畫質三頻道錄像，23 分鐘。英國 FACT 藝術與創意科技基金會委託製作。
Worlds in the Making, 2011. Three-channel HD, 23 minutes. Commissioned by FACT.



〈多重世界形成中〉，2011。高畫質三頻道錄像，23 分鐘。
英國 FACT 藝術與創意科技基金會委託製作。
Worlds in the Making, 2011. Three-channel HD, 23 minutes.
Commissioned by FACT.



〈磁力電影〉，2007。高清單頻道錄像，立體音響，4 分 47 秒。
Magnetic Movie, 2007. Single-channel HD, stereo sound, 4 minutes 47 seconds.

莎拉·史帕克斯

Sarah Sparkes

「我們如何製造鬼？」—這是莎拉·史帕克斯的作品拋出的提問，是個在許多層面都相當具煽動性的問題。她和社會科學家、超自然現象偵查家、懷疑論者們密集合作，檢驗當人們認為自己察覺到某種似乎不具物理性存在的靈體時，究竟是種什麼樣的經驗。哪些文化因素一起發揮作用時，可能會產生靈魂，以及當特定的環境和歷史時刻的條件不同時，所創造出的鬼魂又會有何種差異，都是其作品關注的面向。

這項調查的一部分，涉及史帕克斯與超自然現象偵查家暨異常心理學博士克里斯·法蘭區的密切合作，並從此產生出可觀的特定區域研究素材。於倫敦大學金匠學院從事研究的法蘭區博士，諳於從心理學的觀點來探討人們的超自然經驗。

裝置作品〈鬼客方程式〉引用關於鬼魂和信仰鬼魂的研究所採納的各類主張，試圖提供一個中立的平台，讓觀者可以在此探討和質問鬼魂這個概念。

史帕克斯的作品以〈鬼客隧道〉為中心，設想出能穿越展間的門戶或蟲洞。在英國利物浦的地下迷宮威廉森隧道有另一座〈鬼客隧道〉。藝術家宣稱兩座隧道相連。

此作品最初於英國利物浦 FACT 藝術與創意科技基金會展出。史帕克斯與該基金會合作時，多方蒐集利物浦當地的鬼故事，以此建構起線上資料庫：www.theghostportal.co.uk。她在臺灣駐村期間將持續進行這方面的研究，作為擴充此資料庫的素材。

藝術家將於國立臺灣美術館駐村期間進行一場〈鬼客交換〉計劃，從中搜集臺灣鬼故事以及相關文化物件，並寫入〈鬼客入口通道〉網站資料庫。藝術家同時與臺灣在地鬼魂研究者合作，包括心理學家、文史學家、藝術家等，檢視記錄民間社會與鬼靈世界互動的文化重要性。

史帕克斯並於國立臺灣美術館召開跨領域研討會〈鬼客大會〉，邀請講者討論鬼魂的概念。

The work of Sarah Sparkes asks the question, provocative on many levels: ‘How do we make ghosts?’ Sparkes works intensely with social scientists, paranormal investigators, and sceptics to examine what it is we actually experience when we think we perceive a presence that does not seem to physically exist. Her work considers what cultural factors may come together to produce a spirit, as well as how ghosts may differ given the environment, and moment in history, that creates them.

As part of this exploration, and the incredible wealth of location-specific research it has created, Sparkes has worked extensively with paranormal investigators and anomalistic psychologist Prof. Chris French (based at Goldsmiths, University of London), who investigates our experience of the paranormal from a psychological point of view.

The GHost Formula installation, whilst making reference to the many positions adopted in the research of ghosts and ghost belief, aims to provide a neutral platform from which the visitor can investigate and interrogate the idea of the ghost.

The installation centres around *The GHost Tunnel*, Sparkes’ visualisation of a portal, or wormhole, exiting-entering the gallery space. Another version of this Tunnel is located in Williamson Tunnels Heritage Centre in Liverpool. The artists’ proposition is that these two *GHost Tunnels* are linked.

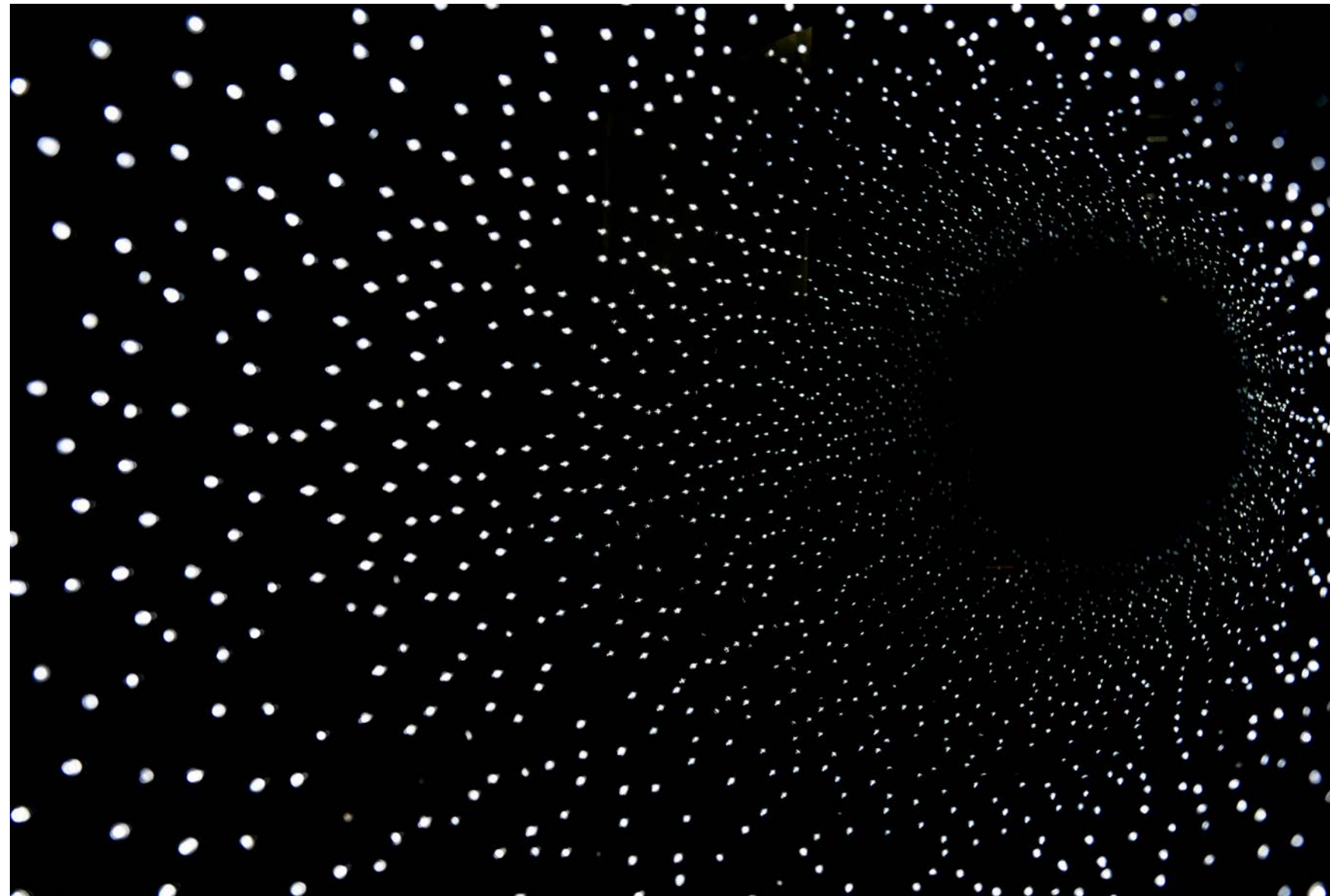
The installation was first shown at the Foundation for Art and Creative Technology (FACT) in Liverpool, UK. Sparkes worked closely with FACT to collect Liverpool ghost stories for an online archive: www.theghostportal.co.uk. The archive together with *The GHost Formula* Installation will expand and evolve as she continues her research into ghost culture in Taiwan.

During an artist residency at the National Taiwan Museum of Fine Arts (NTMoFA) and operating under the title and concept of *The GHost Exchange* Sparkes will collect local Taiwan ghost stories for *The GHost Portal* web archive. She will work with Taiwan based ghost researchers, including psychologists, local historians and artists, to examine and document the cultural significance of human interaction with a spirit world.

Furthermore Sparkes will convene one of her *GHost Hostings* events at NTMoFA, an interdisciplinary symposium where guest speakers manifest and discuss the idea of the ghost.



〈鬼客方程式〉，2016。多媒體裝置、檔案室空間、網路數位平台、鬼客機器。英國 FACT 藝術與創意科技基金會委託製作。
The GHost Formula, 2016. Multimedia installation, archive space, web portal, GHost machine. Commissioned by FACT.



《鬼客方程式》，2016。多媒體裝置、檔案室空間、網路數位平台、鬼客機器。英國 FACT 藝術與創意科技基金會委託製作。
The GHost Formula, 2016. Multimedia installation, archive space, web portal, GHost machine. Commissioned by FACT.

策展人及藝術家簡歷
Curators and Artists' Biographies

策展人

羅伯·拉·弗蘭内斯

羅伯·拉·弗蘭内斯博士為當代藝術獨立策展人，以原創性委託製作為主，與全球各地藝術家的創意合作。1997 年加入藝術催化劑策展公司（The Arts Catalyst）的團隊後，在此工作的十七年間推展了一項極具野心的藝術計畫，並負責一些全球最創新的藝術與科學展覽和活動。舉例來說，拉·弗蘭内斯是首位體驗零重力的策展人，從此衍伸出許多機會，讓五十多位藝術家與科學家在過去只有太空人和科學家可以接觸到的環境中工作。最近一次為藝術催化劑策畫的大型展覽「月球共和國」（Republic of the Moon）於2013年至2014年間在英國 FACT 藝術與創意科技基金會及倫敦南岸舉行。其他近期策劃展覽包括托馬斯·薩拉塞諾（Tomas Saraceno）的「飛行太陽能」（Aerosolar），羅賓中心，德克薩斯大學阿爾帕索分校，新墨西哥州白沙沙漠；「當未來曾是關於液壓破裂法」（When the Future was About Fracking），丹地當代藝的中心空間；「外部行星群」（Exoplanet Lot），龐畢度藝術館（Maison Des Arts Georges Pompidou），法國；以及南法洛特河谷多處場地。

拉·弗蘭内斯同時也是作家及編輯，1979年創辦極具影響力的當代文化期刊《行為藝術》（Performance magazine）。現階段正與臨場藝術發展社（Live Art Development Agency）共同策辦一項與《行為藝術》期刊有關的當代性計畫並建構網站。拉·弗蘭内斯目前是伯恩茅斯大學客座研究員、法國卡雅克的龐畢度藝術館客座策展人、邦加羅爾 Srishti 學院籌辦的「運輸的未來」（Future of Transportation）三年計畫的負責人。

麥克·斯塔布斯

麥克·斯塔布斯是英國 FACT 藝術與創意科技基金會藝術總監暨執行長，該基金會是委託創作並展出電影、錄像及新媒體藝

術的頂尖英國組織。2007 年 5 月，斯塔布斯被利物浦約翰摩爾斯大學（John Moores University）聯合指派教授藝術、媒體與策展相關領域。他曾擔任澳洲動態影像中心（ACMI）節目主任、蘇格蘭鄧迪大學（University of Dundee）視覺研究中心資深駐地研究員，也是赫爾時基藝術（Hull Time Based Arts）的創始總監。

斯塔布斯是ROOT、「燃燒之林」（Burning Bush Bush）和「拋棄常規設備」（Abandon Normal Devices）等藝術節背後的重要推手。他委託製作了逾 350 場展覽，及互動式、現地製作、表演、聲音及動態影像等各種形式的展覽節目及藝術作品，其中包括為ACMI製作的「白色噪音」（White Noise）、「史丹利·庫柏力克」（Stanley Kubrick）和「皮克斯」（Pixar）等節目，並為FACT的文化之都專案（2008年）製作了「Sk-介面」（Sk-Interfaces）和「皮皮洛蒂·瑞斯特」（Pipilotti Rist）展覽。斯塔布斯也是利物浦雙年展的策展成員之一。

斯塔布斯是屢屢獲獎且備受尊崇的動態影像藝術家。他的創作包含電影、錄像、複合媒材裝置及表演。他曾獲十多項重要國際獎項，包含歐柏豪森（Oberhausen）和盧卡諾（Locarno）影展大獎，並於 1999 年受邀在倫敦泰德現代美術館（Tate Modern）推出個人的錄像回顧展。

藝術家

塔妮婭·坎迪亞尼

創作資歷遍及墨西哥和全球各地的坎迪亞尼（1974 年生於墨西哥），對於語言系統、聲音、科技的邏輯系統之間的複雜交集深感興趣。作品中廢棄、過時的氛圍透露某種懷舊情愫，試圖彰顯人工製品的論述性內涵，和過去對未來的想像。她在聲音、文字、圖型、機器之間的轉化過程中，創造出論述性的聯想，並揭露思考的邏輯。

坎迪亞尼的創作過程始終和語言分不開，而其主軸則越來越

偏向聲音的物質性、機器人的概念、機械裝置的可能性、透過建築而感受到的體驗。

陳滢如

錄像是陳滢如（1977 年生於臺北）的主要創作媒介，此外也涉足攝影、裝置、繪畫等領域。過去幾年，她聚焦於權力在人類社會的功能、民族主義、種族主義、極權主義、集體思想，或集體（無）意識的探討，近期作品更進一步檢視宇宙和人類行為的關係。

陳滢如曾參與多項重要的國際展覽及影展，包括「利物浦雙年展」（英國，2016 年）、「第 66 屆柏林影展」的延展單元（德國，2016 年）、「第 20 屆雪梨雙年展」（澳洲，2016 年）、「超距作用－陳滢如個展」（臺灣，2015 年）、「上海雙年展」（中國，2014 年）等。目前居住在臺灣臺北，並於此地創作。

吉娜·扎奈齊

吉娜·扎奈齊（1965年生於英國伊明漢姆）運用裝置、雕塑、錄像、特定場域創作等多元、前衛的媒材實現其藝術創作。

扎奈齊在 1980 年代製作動畫電影和錄像，以此開啓她的藝術生涯。那時期的作品透過對內臟、心理、生物體的解析，把重心聚焦在哲學性的提問，接著在 1990 年代中期開始，融入了她嚮往的生命科學和科技的結合性發展，其可應用的範圍，以及如何用之於塑造並建構本體性。扎奈齊經常與來自音樂、程式設計、科學等領域的專家合作。目前居住於英國利物浦。

約翰·杭特

約翰 A·杭特（1966年生於英國）是名研發科學家，專門研究如何將物質和活細胞結合，為慢性病和身理創傷病患，提

供健康老化和再生藥物的治療。杭特在公共空間展示的活體裝置合了藝術與科學，而這般結合提供跨越邊界—— 真實或想像—— 的途徑，並激發出對話與討論。

伊芙莉娜·多明尼奇 & 狄米區·傑爾方德

狄米區·傑爾方德（1974年生於俄羅斯聖彼得堡）和伊芙莉娜·多明尼奇（1972 年生於白俄羅斯明斯克）將物理、化學、電腦科學與神秘哲學學說結合，創造出感官沉浸的環境。這兩位藝術家應用當今的調查研究結果，尤其是關於波動現象方面，來研究感知和永恆的議題。他們的裝置作品拒絕使用紀錄和固定媒材，而是呈現以觀察為目的的恆變狀態現象。這種經驗所產生的立即效應，會讓觀者能夠超越科學發現和知覺擴大之間假想出的差異。

尼克·雷辛

尼克·雷辛（1973年生於倫敦）曾就讀於杜塞道夫美術學院及倫敦的皇家美術學院，目前住在柏林。尼克·雷辛在其包含雕塑、裝置、電影、繪畫等媒材的作品中，深入科學的邊緣地帶，調查科學和不可理解之事物的關聯。雷辛的雕塑和裝置作品經常以幾世紀前的科學家和數學家的理想和願望為藍本，企圖找出過時和被忽略的事物中未被發掘的潛質。他也曾以利用能源創作，對自由能源領域進行研究，還試圖複製弗里德里希·尤爾金森（Friedrich Jürgenson）創先製造出的收音機，以此收集亡者發出的聲音頻率。

那姆·曼特拉

身兼藝術家及音樂家的那姆·曼特拉（1979 年生於墨西哥）目前居住於柏林並在此地從事創作。作品以計畫性的形式呈現，將重點放在探討平常性議題可以激發出的奇幻異想和魔力，並利用外太空科技和魔術手法創造出極端的觀點。

曼特拉於2014 年獲國際宇宙航行聯合會（International Astronautical Federation，簡稱IAF）授予青年太空領袖的殊榮，表揚其投注在外太空活動方面的文化貢獻。另外也曾和俄羅斯的加加林太空人培訓中心（Yuri Gagarin Cosmonaut Training Centre）合作，協同策畫「關於重力」（Matters of Gravity）計畫，邀請藝術家參與零重力太空任務。

曼特拉是位於巴黎的國際宇宙航行聯合會空間文化利用技術委員會（Technical Committee for the Cultural Utilizations of Space at the IAF）的統籌，並負責主導文化及外太空國際大會「KOSMICA」，另於2015年策畫在墨西哥市舉行的數位藝術雙年展「Transitio_MX」。

曼特拉是墨西哥的國家文化藝術基金會（National Fund for Culture and Arts，簡稱FONCA）的現任研究員，並在此基金會的資助下發展〈關鍵魔術〉一作。

安娜斯·邁爾－布蘭狄斯

安娜斯·邁爾－布蘭狄斯（生於1973年）探討事實與虛構之間的地帶——一項在建造物中追求一定程度現實的藝術研究。

她於2003年創立隱藏礦脈研究筏（Forschungsfloss FFUR / Research Raft for Subterranean Reefology），這是一件在「藝術與主觀科學學院」（Institute for Art and subjective Science）範圍下持續變化的整合裝置。

她的作品是以與德國航空航天中心合作進行的無重狀態藝術實驗為基礎，由此衍生發展出一系列具體成果，包括用雲生成的〈對流層實驗室內〉（*Inside the Tropospheric Laboratory* 2010年），和〈月鵝殖民地〉（*Moon Goose Colony*，2011年起迄今）。近期作品以歐洲林業站為架構，觸及樹木遷移和

氣候研究的主題，最後完成作品包括在芬蘭修迪亞拉的〈茶遙測樹站〉（*Tealemetree Station*，2015年），和創辦中的〈全球茶杯網〉（*Global Teacup Network*，2015年起迄今）。

遠房親戚實驗室（曹存慧、葛昌惠、吳牧青）

以物種論，非曰萬物皆有靈，而是萬物皆為遠房親戚；以法律論，民法第983條有令，旁系血親在六親等以內者不得結婚，以人類趨避行為慣性而言，七等親成為遠房親戚定義的起點。六度分隔理論見證了社群時代的收斂，七等親以外的廣大田野是遠房親戚的發散磁場。實驗室，先講究效果，再研究不傷身體，並永遠準備成立一間對照室，繁殖永恆的思想發（渙）散。

曹存慧（生於1974）。嘗試以科學作為創作基礎，以藝術擴張科技可能，以情緒帶領理智，以理性嘲弄感性。平日翻進翻出學術高牆，協調不佳，立場混亂經常摔倒。時間不可逆，肉身做戰場，不奢望平衡。自體跨領域：專長涵蓋分子生物、基因工程、基因體學、鑽牛角尖、生物科技，興趣包括公民科學、再生能源、胡思幻想、沒事找事。曾是幼稚園小朋友、小中大學生、真心想畢業萬年研究生，現職努力求生存千年博士後研究員；簡稱一介書生。觀察中，假設著，求證中。

葛昌惠（生於1982）。藝術攝影師、劇場設計師、短片導演及搖滾樂團成員。她的作品關切著社會議題與心靈中的孤寂，呈現一種灰暗尖銳的視覺印象。並以劇場的經驗，刻劃敘事性的畫面與人物，創作強烈批判性與詭異魔幻的氛圍。常態性發表創作作品於攝影展、影展。並與藝文團體、劇團、樂團合作，拍攝形象人物攝影、MV。並開設攝影教學課程、講座、工作坊，以自身的實務經驗與理論知識，推廣概念美學之肖像攝影。

吳牧青（生於1977），前中年焦慮夾層世代生長的頭號文化恐怖分子，擅長各式文化政治行動的突襲、爆破、拆解、反

制與滲透。於藝文界的身份定位不明並始終處於液態流動的狀態，過去曾有文化評論、策展人、記者、音樂節企劃、社會運動人士、DJ等狀態，並持續開發新的行為角色可能，看似作為一名文化液態駭客指日可待。目前居住與工作地為臺北。

海倫·皮諾

藝術家海倫·皮諾（生於1964年）的生活及創作以雪梨和倫敦兩地為主，作品利用自身在生物科學和視覺藝術雙重領域的背景，檢視人體的內部，以及在哲學含義和經驗主義上難以界定的模糊地帶，例如生死的交界，和器官移植的互為主體性。

皮諾的創作包含裝置、媒體藝術、錄像、攝影、雕塑、行為等類型，經常參與歐洲、澳洲、亞洲等地的展出，並獲得諸多國內外獎項，包括以合作型創作〈身體是個巨大的地方〉（*The Body is a Big Place*）獲得2012年奧地利林茲的國際電子藝術競賽優選。

半導體

半導體的成員是英國的露絲·賈曼（Ruth Jarman）及喬·格哈德（Joe Gerhardt）這對藝術家雙人組。他們的動態影像作品在視覺與知識層面都相當吸引人，內容探討這個世界的物質性，以及人類如何透過科學和科技的鏡片去體驗此物質性。他們獨特的藝術取向為其獲得了許多獎項、委託創作計畫、著名的研究基金，如2015年歐洲核子研究組織大型強子對撞機奧地利國際電子藝術獎（Collide @ CERN Ars Electronica Award）、2015年傑伍德開放林業獎助計畫（Jerwood Open Forest）和2012年三星藝術＋大獎（Samsung Art + Prize）。近年參展及影片放映經歷則

有：2016年「宇宙和藝術」，日本東京森美術館、2016年「信息空間」（Infosphere），德國卡爾斯魯厄新媒體藝術中心、2016年「看見圓角」（Seeing Round Corners），馬蓋特透納當代美術館、2015年「失序量子」（Quantum of Disorder），蘇黎世裝置藝術之家、2014年「達文西：塑造未來」（Da Vinci: Shaping the Future），新加坡藝術科學博物館、2013年「世界微光」（Let There Be Light），巴塞爾電子藝術館（個展）。他們甫獲2016年SónarPLANTA的委託案，其五頻道動態影像作品於2016年6月在巴塞隆納的「聲納音樂節」（Sónar Festival）全球首映。

莎拉·史帕克斯

莎拉·史帕克斯（生於1969年）是生活及工作於倫敦的藝術家暨策展人，曾就讀於金士頓大學和切爾西藝術學院，並完成倫敦大學的研究院課程。在英國國內和全世界都擁有豐富的展出經歷，並獲許多獎項和獎助金，包括2015年的梅魯藝術＊科學獎（MERU ART*SCIENCE Award）。近期展覽包括在倫敦新藝術計畫畫廊（New Art Projects）的「英格蘭魔力」（English Magic），和第56屆威尼斯雙年展的「叛逆天使的墮落」（Fall of the Rebel Angels）。

史帕克斯的作品探討魔幻或神秘的敘事、民間信仰系統、異常現象的視覺化、藉入口的隱喻討論闕限主題。作品多半為研究導向，深入探勘科學和魔力相交的邊界地帶。創作領域含括裝置、雕塑、繪畫、行為外，近期也開始嘗試影片創作。她是視覺藝術和研究計畫〈鬼客〉的負責人，經常以這個主題演講並曾發表相關文章。

Curators

Rob La Frenais

Dr. Rob La Frenais is an independent contemporary art curator, working internationally and creatively with artists entirely on original commissions. From 1997 and for seventeen years onwards, La Frenais was based at The Arts Catalyst, where he developed an ambitious artistic programme and was responsible for some of the most innovative art and science exhibitions and events in the world. For example, La Frenais was the first curator ever to experience zero gravity, and went on to enable around 50 artists and scientists to work in an environment previously only experienced by astronauts and space scientists. His last major exhibition with The Arts Catalyst, “Republic of the Moon”, happened in 2013-14 at FACT and London’s South Bank. More recent exhibitions include “Aerosolar” by Tomas Saraceno, Rubin Center, University of Texas at El Paso and White Sands Desert, New Mexico; “When the Future was About Fracking”, Centrespace at Dundee Contemporary Arts; “Exoplanet Lot”, Maison Des Arts Georges Pompidou, France; and sites throughout the Lot Valley, SW France.

La Frenais is also a writer and editor, and founded the influential contemporary cultural journal *Performance Magazine* in 1979. He is currently developing a contemporary project and website about *Performance Magazine* with Live Art Development Agency, is a visiting fellow of Bournemouth University, and a visiting curator at the Maison Des Arts Georges Pompidou, Cajarc, France. La Frenais also runs the 3-year “Future of Transportation” project at Srishti Institute, Bangalore.

Mike Stubbs

Mike Stubbs is the Artistic Director & CEO of Foundation for Art and Creative Technology, the UK’s leading organisation for the commissioning and presentation of film, video and new media art forms. Stubbs was jointly appointed in May 2007 by John Moores Liverpool University, where he is Professor of Art, Media and Curating. Previously he was

Head of Program for ACMI, the Australian Centre for Moving Image, Senior Research Resident at The University of Dundee’s Visual Research Centre and founding Director at Hull Time Based Arts (HTBA).

A driving force behind “ROOT, Burning Bush Bush” and the “Abandon Normal Devices festivals”, Stubbs has commissioned and produced over 350 exhibitions, interactive, site specific, performative, sound and moving-image based exhibition programmes and artworks. These include “White Noise”, “Stanley Kubrick” and “Pixar” for ACMI, “Sk-Interfaces” and “Pipilotti Rist” for FACT’s Capital of Culture 2008 programme. Stubbs is part of Liverpool Biennial’s curatorium.

Stubbs is an award-winning and respected moving image artist. His own work encompasses film, video, mixed media installations and performance. He has won more than a dozen major international awards including first prizes at the “Oberhausen” and “Locarno Film Festivals”, and in 1999 was invited to present a video retrospective of his work at the Tate Gallery, London.

Artists

Tania Candiani

With extensive experience in Mexico and internationally, Candiani (b.1974, Mexico) is interested in the complex intersection between language systems, sound, and logics of technology. There is some nostalgia for the obsolete in her work, which seeks to make explicit both the discursive content of artifacts, and projections for the future envisioned in the past. Her translation processes between sound, words, patterns, and machines create discursive associations and reveal logics of thinking.

Candiani’s creative processes continue linked with language, and her intention is increasingly oriented towards the materiality of sound, the idea of the automaton, the possibilities of mechanisms and the sensible experience with architecture.

Yin-Ju Chen

Yin-Ju Chen (b.1977, Taipei) uses video as her premier medium, but she also works on photos, installations and drawings. In the past few years she has focused on the function of power in human society, nationalism, racism, totalitarianism, collective thinking or collective (un)conscious. Her recent projects also engage in the relations between cosmos and human behaviour.

Chen has participated in many important international exhibitions and film festivals, such as Liverpool Biennial (UK, 2016), “Forum Expanded” at “66th Berlin Film Festival” (DE, 2016), “20th Biennial of Sydney” (AU, 2016), “Action at a Distance—Yin-Ju Chen Solo Exhibition” (TW, 2015), “Shanghai Biennial” (CH, 2014). She currently lives and works in Taipei City, Taiwan.

Gina Czarnecki

Gina Czarnecki (b.1965, Immingham) realises her art in a diverse and often unconventional range of media, including installations, sculpture, video, and site specific works.

Czarnecki started her career making animated film and video in the 1980s that focused on philosophical questions through engaging with the visceral, psychological and biological body. Since the mid 1990’s this was combined with her fascination with convergent developments in life sciences and technologies, their possible applications and how this shapes and informs identity. Czarnecki works often in collaboration with musicians, programmers and scientists. She currently lives in Liverpool, UK.

John Hunt

John A. Hunt (b.1966, U.K.) is a research scientist driving towards providing treatments for healthy ageing and regenerative medicines for chronic diseases and physical trauma, through combining materials with living cells. Merging art with science as living installations in public spaces is how John has got involved in art. The combination of science and

art provides a means to cross boundaries - real or imaginary - and ask questions of anyone and everyone and debate any the matters arising.

Evelina Domnitch & Dmitry Gelfand

Dmitry Gelfand (b.1974, St. Petersburg, Russia) and Evelina Domnitch (b.1972, Minsk, Belarus) create sensory immersion environments that merge physics, chemistry and computer science with uncanny philosophical practices. Current findings, particularly regarding wave phenomena, are employed by the artists to investigate questions of perception and perpetuity.

Having dismissed the use of recording and fixative media, Domnitch and Gelfand’s installations exist as ever-transforming phenomena offered for observation. The immediacy of this experience allows the observer to transcend the illusory distinction between scientific discovery and perceptual expansion.

Nick Laessing

Nick Laessing (b.1973, London) studied at the Düsseldorf Art Academy and the Royal Academy of Arts in London, and now lives in Berlin. In his work, composed of sculptures, installations, films and drawings, Nick Laessing explores the border areas of science, probing its relationship to the inconceivable. Often drawing on the utopian and aspirations of scientists and mathematicians of the past centuries, Laessing’s sculptures and installations attempt to find the unexploited potentials in the obsolete or overlooked. He has also worked with harnessing energy, research into the free energy community, as well as attempting to replicate a radio first made by Friedrich Jürgenson to capture the frequency of the voices of the dead.

Nahum Mantra

Nahum Mantra (b.1979, Mexico) is an artist and musician based in Berlin. His work focuses on producing projects

that explore the possibilities of generating wonder and enchantment of everyday issues. By using outer space technologies and magic strategies his projects create extreme perspectives.

In 2014 Mantra was recognized as a Young Space Leader by the International Astronautical Federation for his cultural contributions to outer space activities.

He co-directed a space mission in zero gravity by artists, in collaboration with the Yuri Gagarin Cosmonaut Training Centre in Russia, called “Matters of Gravity”.

He is the coordinator of the Technical Committee for the Cultural Utilizations of Space at the IAF in Paris and directs the international festival of culture and outer space “KOSMICA”. In 2015 Mantra curated the digital arts biennial “TransitoMx” in Mexico City.

Mantra is a current fellow of the National Fund for Culture and Arts (FONCA) in Mexico who kindly support the development of *Critical Magic*.

Agnes Meyer-Brandis

Agnes Meyer-Brandis, (b.1973) is exploring the zone between fact and fiction - an artistic research on the quest for a degree of reality within constructions.

In 2003 she founded the Forschungsfloss FFUR / Research Raft for Subterranean Reefology, a constantly transforming meta-installation in the scope of an ‘Institute for Art and Subjective Science’.

Based on an artistic experiment in weightlessness conducted in cooperation with the German Space Agency DLR, her work concluded in a series of realisations, such as the cloud generating *Inside the Tropospheric Laboratory* (2010) and the *Moon Goose Colony* (since 2011, ongoing). Her recent works take place in the framework of European forestry stations. They are related to tree migration and climate research, concluding in pieces such as *Tealemetree Station*

(2015) in Hyytiälä, Finland, and the start up the *Global Teacup Network* (2015, ongoing)

Lab of the Distant Relatives (Theresa Tsun-Hui Tsao, Chang-Huei Ge, Mu-Ching Wu)

Although the Theory of Species does not mention the pneuma of living creatures, it describes all organisms as distant relatives. From a legal perspective, Article 983 of Taiwan’s Civil Law Code states that one should not marry a collateral relative by blood within the sixth degree of kinship. According to customary human avoidance behavior, distant relatives are relatives beyond the seventh degree of relations. The theory of the Six Degrees of Separation shows the convergence of the social community era, while relatives beyond the seventh degree are on the enlarged magnetic field of divergence. Our lab works firstly on creating the optimal impacts, and then studies to avoid physical risks. We are always preparing a control/contrast room for the experimental lab, in which diverging/distracting thoughts procreated immortally.

Theresa Tsun-Hui Tsao (b.1974) tries to use science as a creative foundation and to use art for expanding the possibilities of technology, with sense guided by sensibility and sentiments taunted by logic. She climbs in and out of the academic institutions, and often tumbling by her poor coordination and ambiguous position. When time is irreversible and body is the battleground, equilibrium is an extravagant hope. Tsao works in cross-disciplinary fields, expertizes in molecular biology, genetic engineering, genomics, taking unnecessary pains on trivia, and biotechnology. Her interests encompass bio-hacking, renewable energy, day dreaming, and making something out of nothing. As a professional nerd, she has spent years in a kindergarten, a primary school, four high schools, as an undergrad and then a postgrad; she is now a postdoc struggling to survive. She observes, hypothesizes, and makes the truth.

Chang-Huei Ge (b.1982) is an art photographer, theater designer, and short film director. She plays in a rock band.

Her work focuses on social issues and spiritual loneliness, resulting in a visual impression that is dark, gloomy but also sharp. She uses her theatrical experience to depict narrative-based images and characters, creating art of strong critical quality with an ambiance that is peculiar and mystical. Ge’s work is regularly showcased in photography and film exhibitions. She collaborates with art, theater groups and bands to create image photography, portraits and music videos. She also hosts photography classes, seminars, and workshops, where she shares her practical experience and theoretical knowledge to promote portrait photography with conceptual aesthetics.

Mu-Ching Wu (b.1977), a pre-midlife cultural terrorist of the sandwich generation. Through various cultural political actions, he attacks, explodes, deconstructs, resists, and infiltrates. His position on the fields of arts and culture is somehow ambiguous and perpetual fluid. A few roles he has previously taken include cultural critic, curator, journalist, music festival organizer, social activist, and disc jockey. Wu continues to explore new possibilities of behavioral roles, showing the potential of soon becoming a liquid-state cultural hacker. He is currently based in Taipei.

Helen Pynor

Helen Pynor (b.1964) is a Sydney and London-based artist. Drawing on her dual backgrounds in the biological sciences and the visual arts, Pynor’s work explores the interiority of the human body and philosophically and experientially ambiguous zones such as the life-death boundary and the intersubjective nature of organ transplantation.

Pynor’s work includes installation, media art, video, photography, sculpture, and performance. She has exhibited widely in Europe, Australia and Asia and has been a recipient of national and international awards including an Honorary Mention at Prix Ars Electronica, Linz (2012) for her collaborative work *The Body is a Big Place*.

Semiconductor

Semiconductor is UK artist duo Ruth Jarman and Joe Gerhardt. They make visually and intellectually engaging moving image works, which explore the material nature of our world and how we experience it through the lens of science and technology. Their unique approach has won them many awards, commissions and prestigious fellowships including; Collide @ CERN Ars Electronica Award 2015, Jerwood Open Forest 2015 and Samsung Art + Prize 2012. Recent exhibitions and screenings include; “The Universe and Art”, Mori Art Museum, Tokyo, Japan, 2016; “Infosphere”, ZKM, Karlsruhe, 2016; “Seeing Round Corners”, Turner Contemporary, Margate 2016; “Quantum of Disorder”, Museum Haus Konstruktiv, Zurich, 2015; “Da Vinci: Shaping the Future”, ArtScience Museum, Singapore, 2014; “Let There Be Light”, House of Electronic Arts, Basel 2013 (solo show). They were recently awarded the SónarPLANTA 2016 commission. The five-channel moving image work premiered at Sónar Festival, Barcelona June 2016.

Sarah Sparkes

Sarah Sparkes (b.1969) is a London-based artist and curator. She studied at Kingston University and Chelsea School of Art, and completed a Research Fellowship at the University of London. She has exhibited widely in the UK and internationally and been the recipient of numerous awards and scholarships – in 2015 she was winner of the MERU ART*SCIENCE Award. Recent exhibitions include “English Magic” at New Art Projects London and “Fall of the Rebel Angels” at the “56” Venice Biennale”.

Sparkes’ work engages with magical or mythical narratives, vernacular belief systems, the visualisation of anomalous phenomena and liminality through the metaphor of the portal. Her work is often research led and an exploration into the borderlands where science and magic intersect. She works with installation, sculpture, painting, performance and more recently film. She runs the visual arts and research project *GHost*, and regularly lectures and has published articles on this subject.

協辦單位 Co-organizer



關於英國文化協會 About the British Council

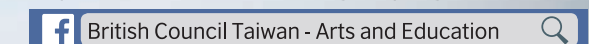
英國文化協會於1934年由英國皇室設立，為英國專責推廣藝術文化關係並創造教育機會的國際組織，在全球超過100個國家擁有160個辦公室，藉由創意與知識的交流，促進不同族群與文化之間的信任與合作。

近幾年來，英國文化協會臺灣辦公室促成臺灣各藝文單位、公家機關與英國知名藝文團體與藝術家交流，如英國皇家芭蕾舞團、莎士比亞環球劇院、英國莎士比亞故居信託基金會，以及愛丁堡藝穗節；協助臺灣企業舉辦國際藝術獎項，將臺灣推向國際藝術文化舞台；邀請英國新銳設計師作品於「臺北魅力展」繽紛展出英倫當代時尚，響應「2016臺北世界設計之都」活動，舉辦創意食物計劃展覽，並促成英國設計師來臺驻村交流。2017年起，更朝向支持文化平權，包括無障礙藝術，藝術與創意高齡化社會，以及文化領袖力的議題與臺灣藝文夥伴一同促進更多元豐富的臺英交流。

The British Council is the United Kingdom's international organization for cultural relations and educational opportunities. Founded in London in 1934, we currently operate in over 100 countries and territories worldwide. The goal of our work is to promote the understanding and collaboration between UK and Taiwan on arts and creative economy.

For our recent art works in Taiwan, we have been facilitating many collaborations between mainstream local art partners and British arts organisations and artists, such as The Royal Ballet, Shakespeare's Globe, Shakespeare Birthplace Trust, selected performing groups from the Edinburgh Fringe Festival by introducing the best of British visual arts, architecture, design, performing arts, film, literature and cultural skills to Taiwan. We also showcased the UK fashion designers' talent in Taipei IN Style, took part in World Design Capital Taipei 2016 in an exhibition and artist residency programme. Starting from 2017, we would work in the areas of Arts & Disabilities, Arts & Creative Ageing, and Culture Leadership with local partners facilitating more innovative and diverse Taiwan-UK collaborations.

<http://www.britishcouncil.org.tw/programmes/arts>



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