



Our Partnerships are Prosperous like  
Oak Branches  
合作 · 枝葉扶疏



PolyU's partnerships extend around the globe, offering numerous opportunities for research collaboration along with student exchange and experiential learning. Like the spreading branches of a majestic oak, our cooperation with government agencies, multinational companies and academic institutions ensures that we advance knowledge and foster world advancement across the widest possible area.

理大與不同界別建立的夥伴關係遍及全球，不僅促成眾多科研合作，也為學生提供了交流及體驗式學習的機會。大學與政府部門、跨國企業和學術機構緊密協作，猶如橡樹枝幹般繁盛茂密，令理大得以開拓知識，並推動世界各地的進步。

# Strong Worldwide Connection

## 緊繫國際社會

Russian Space Agency and European Space Agency  
俄羅斯太空總署及歐洲太空總署



In 1995, the Space Holinser Forceps developed with the support of PolyU engineers were commissioned by the Russian Space Agency for use on the MIR Space Station. Building on this success, the PolyU team developed the Mars Rock Corer, a rock-sampling tool that cleverly integrates the characteristics of chopsticks, which was used on the European Space Agency's Mars Express Mission in 2003.

1995 年，俄羅斯太空總署訂製由理大工程師協助研發的「太空持炭鉗」，以供「和平號」太空站使用。理大團隊之後再接再厲，研發出「岩芯取樣器」，這部用以採取石塊樣本的儀器，揉合了筷子的特色，並應用於 2003 年歐洲太空總署進行的「火星快車」計劃。

US National Aeronautics and Space Administration  
美國太空總署



Since 1992, PolyU has cooperated fruitfully with the US National Aeronautics and Space Administration (NASA). In 1997, the then PolyU President Prof. Poon Chung-kwong and NASA's representative signed an agreement for a global atmosphere study, and in 2010 used cutting-edge satellite imaging technology to analyse aerosol levels in the Pearl River Delta.

理大自 1992 年起與美國太空總署展開合作，成果豐碩。1997 年，時任理大校長潘宗光教授與太空總署代表簽署協議，進行全球大氣研究；2010 年，雙方再度合作，利用先進的衛星成像技術分析珠三角的懸浮粒子水平。

The Boeing Company  
波音公司



In November 2012, PolyU President Prof. Timothy W. Tong and representative of The Boeing Company signed a Memorandum of Understanding for the establishment of Hong Kong's first Aviation Services Research Centre (ASRC).

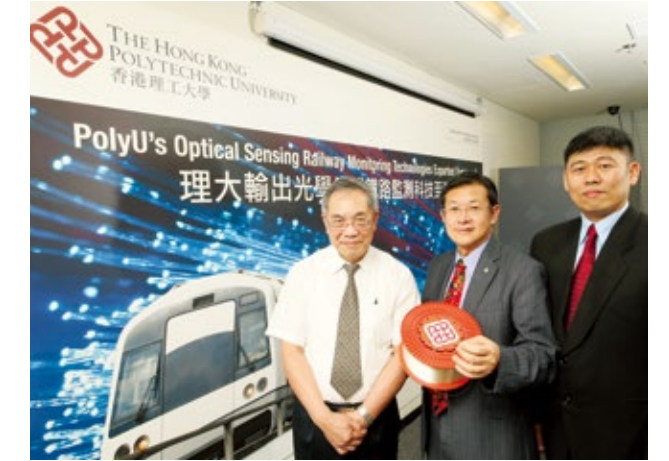
2012 年 11 月，理大校長唐偉章教授與波音公司代表簽署合作備忘錄，成立全港首間「航空服務研究中心」。



The partnership entered into a new phase, with the opening of the ASRC's new research facility in September 2017, boasting state-of-the-art robotic technology to automatically refurbish light damages.

該中心更於 2017 年 9 月新增設施，包括可自動修復飛機輕微損毀的尖端機械人科技，令雙方的合作邁向新里程。

Singapore's Mass Rapid Transit  
新加坡地鐵



PolyU is proud to have developed the world's first optical fibre sensing system for railway monitoring, now installed in Singapore's metro lines. The system cross-monitors tracks and carriages, increasing operational efficiency while lowering costs.

理大成功研發全球首創的光纖傳感鐵路監測系統，現已應用於新加坡地鐵線。這個系統能夠監測路軌及列車的運作情況、提升營運效率並減低成本。

Kinex Pharmaceuticals, Inc.



Researchers at the Department of Applied Biology and Chemical Technology have developed the patented Apigenin Flavonoid Dimer, a novel inhibitor used to overcome multidrug resistance in cancer cells. The research team has licensed this invention to Kinex Pharmaceuticals, Inc. to develop a new oral cancer drug for further clinical trials.

應用生物及化學科技學系的研究人員研發出已獲專利的「芹菜素黃酮類二聚體」，是一種能夠防止癌細胞出現多藥抗藥性的嶄新抑制劑。科研團隊已授權此發明予 Kinex Pharmaceuticals, Inc.，以研發口服抗癌藥作臨床試驗。

Food Safety Consortium  
食品安全聯盟



In January 2015, PolyU established the Food Safety Consortium to foster collaboration between government, industry and the community on the development of technological solutions to global food safety problems. The University further strengthened its commitment to food safety by setting up the DISH — Global Centre for Food Safety with universities in Denmark, Italy and Sweden in 2017.

2015年1月，理大成立「食品安全聯盟」，促進政府、業界及社會合作，推動科技發展以解決全球的食物安全問題。2017年，大學更與丹麥、意大利和瑞典三地的大學共同成立了「DISH 食物安全環球中心」，進一步彰顯理大對提高食物安全的決心。

University Social Responsibility  
Network  
大學社會責任網絡



In October 2015, PolyU and 11 world-renowned universities formed the University Social Responsibility (USR) Network, an international partnership spearheading USR to make the world a better place. Through collaborative USR projects in education, research and community service, varying in scope and scale, the global higher education sector will act as a catalyst for positive social change.

2015年10月，理大與十一所世界知名大學攜手創辦「大學社會責任網絡」，一個倡導大學社會責任以改善世界的先驅國際聯盟。透過成員之間在教育、研究和社會服務方面進行不同範圍及規模的大學社會責任協作項目，讓全球高等教育界推動社會的正向改變。

Solid Partnerships  
with the Chinese  
Mainland  
結連內地夥伴

China Academy of Space Technology  
中國空間技術研究院



In 2010, an agreement between PolyU and the China Academy of Space Technology brought together experts in the development of a camera pointing system for the Chang'e-3 Moon mission.

2010年，理大與中國空間技術研究院簽訂合作協議，匯聚專家為嫦娥三號探月工程研發一個相機指向機構系統。

理大不但憑藉傑出的學術成就影響世界，同時也透過與中國內地緊密連繫推動國家發展。大學與三百五十所中國院校和機構建立夥伴關係、設立境外中心，以及成立位於深圳的產學研基地從事商品化、培訓和科研工作。



A second agreement was signed in 2010 to establish the Joint Laboratory in Precision Engineering for Space Applications. Currently, PolyU and mainland experts are also jointly developing a surface sampling and packing system for China's first space mission to collect lunar samples.

雙方於2010年簽訂另一項協議，共同建造一所「空間精密機械技術聯合實驗室」。現時，理大正與內地專家共同開發一具「表取採樣執行裝置原理樣機」，用於中國航天史上首次採集月壤並把樣本封裝帶回地球。

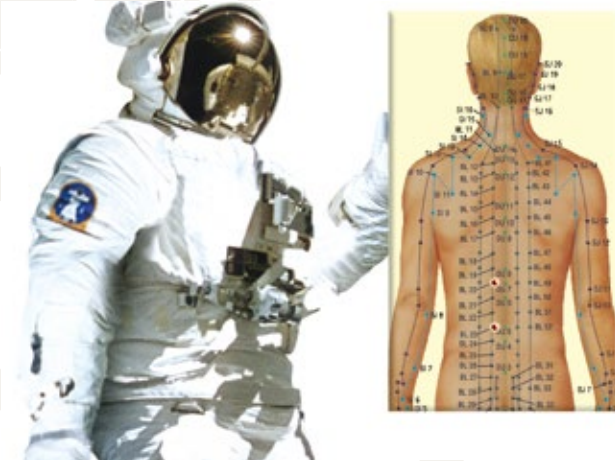
China Aerospace International Holdings Limited  
中國航天國際控股有限公司



In February 2017, PolyU and China Aerospace International Holdings Limited agreed to collaboratively undertake research to meet the technical needs of national aerospace engineering. An intelligent systems joint laboratory will also be designed to pioneer research for aerospace applications.

2017 年 2 月，理大與中國航天國際控股有限公司簽訂合作協議進行研究，回應國家在航天工程方面的技術需求。雙方亦協議成立一所聯合智能系統研究實驗室，開拓航天領域的應用研究。

China Astronaut Research and Training Centre  
中國航天員科研訓練中心



To alleviate the physiological problems associated with exposure to microgravity during space missions, PolyU has collaborated with the China Astronaut Research and Training Centre to develop intervention protocols covering cardio-respiratory function and the cognitive, movement and musculoskeletal systems.

為減輕航天員在太空的微重力環境下工作所引致的生理問題，理大與中國航天員科研訓練中心合作研究多個涵蓋心肺功能、認知系統、運動神經系統和肌肉骨骼系統的項目以尋求可行方法。

China National Space Administration  
中國國家航天局



The Institute of Textiles and Clothing (ITC) and the China National Space Administration collaborated on the design of new work clothes for staff at the Shenzhou VI Control Centre. ITC researchers met stringent requirements, among which anti-static properties were prominent.

紡織及製衣學系與中國國家航天局合作，為神舟六號地面控制中心的工作人員設計全新工作服。研究人員精心製作的工作服要符合局方的嚴格要求，其中物料的防靜電特性至關重要。

Xi'an Jiaotong University  
西安交通大學



Following the first official invitation extended by the Chinese mainland to a Hong Kong academic institution, a PolyU delegation visited Xi'an Jiaotong University in 1978. Building on this connection, and to strengthen students' understanding of the Belt and Road Initiative, PolyU and Xi'an Jiaotong University have co-organised the Silk Road International Summer School since 2014.

理大為香港首家獲邀到中國訪問的專上學府，並於 1978 年派代表團出訪西安交通大學。自此，理大與西安交通大學合作無間。為加強學生對「一帶一路」發展策略的認識，兩校自 2014 年起聯手舉辦「絲路文創暑期班」。

Southwest Jiaotong University  
西南交通大學



More recently in November 2017, the Silk Road International School of Engineering jointly set up by the two universities launched its first university-industry collaboration project to nurture high-level talents in power and energy fields.

2017 年 11 月，兩校成立的「絲綢之路國際工程學院」更舉辦首個校企合作項目，為電力能源業界培育高端人才。

Southwest Jiaotong University  
西南交通大學



As early as 2011, PolyU has started working with Southwest Jiaotong University on various large initiatives to advance the nation's rail-transit technologies. In October 2017, they co-founded the Joint Innovation Centre for Rail Transit Safety Monitoring Technology to enhance structural health monitoring, fault diagnosis and prognosis for China's high-speed rail network.

早於 2011 年，理大已開始與西南交通大學在大型項目上合作，共同發展國家的鐵路科技。2017 年 10 月，雙方創立「軌道交通安全監測技術創新中心」，以完善中國高速鐵路的結構健康監測系統、損耗診斷和預測方法。

Sichuan University  
四川大學



PolyU joint hands with Sichuan University to establish the Institute for Disaster Management and Reconstruction (IDMR) in 2013 to train Sichuanese professionals to provide immediate disaster relief support. The IDMR is China's first institute to integrate disaster prevention and management with social services, education and scientific research.

2013 年，理大和四川大學共建「災後重建與管理學院」，以培訓四川當地專才提供即時救災支援。學院為全國首間將防災和災難管理結合社會服務、教育及科研的機構。

Chinese Olympic Committee  
中國奧委會



In 2005, PolyU was designated a research and technology partner of the Chinese Olympic Committee for the 2008 Beijing Olympics. The University sent experts from disciplines including nursing, optometry, physiotherapy, sports therapy and health technology to help prepare national athletes for the Games.

2005 年，理大被委任為中國奧委會備戰 2008 年北京奧運會的研究及科技合作夥伴，並派出包括護理、眼科視光學、物理治療、運動治療及生物醫學工程等學科的專家，協助中國運動員作好準備出戰奧運。

Huawei Technologies Co. Ltd.  
華為技術有限公司



In November 2016, PolyU and Huawei Technologies Co. Ltd. established Hong Kong's first joint laboratory for high-capacity optical communications and advanced computing systems. Together, PolyU's strengths in technological innovation and Huawei's industry leadership will facilitate the development of new technologies and next-generation advances in long- and short-reach data centre transmission systems and big data computing.

2016 年 11 月，理大與華為技術有限公司設立了香港首間重點研究高傳輸容量光通訊及先進計算系統的聯合實驗室，結合理大在科技創新方面的實力及華為領導業界的優勢，促進長途和短距離數據傳輸系統及大數據計算領域的嶄新技術發展。

# Vast Belt and Road Opportunities

## 掌握「帶路」機遇

With the introduction of China's One Belt One Road development strategy, PolyU sees many opportunities and seeks to foster exchange and collaborations in education and research with institutions along the Belt and Road.

隨著國家推行「一帶一路」發展策略，理大抓緊契機，與「一帶一路」沿綫學府在教育及研究範疇交流合作。

University Alliance of the Silk Road  
絲綢之路大學聯盟



PolyU and Xi'an Jiaotong University, founders of the multinational University Alliance of the Silk Road, work with its 120 university members along the Belt and Road to foster cultural exchange and collaboration on education, science and technology.

理大與西安交通大學聯手創立跨國「絲綢之路大學聯盟」，與「一帶一路」沿綫地區的一百二十間成員大學同心協力促進文化交流及教育和科技方面的合作。

Alliance of Sino-Russian Technical Universities  
中俄工科大學聯盟



In 2015, PolyU joined the Alliance of Sino-Russian Technical Universities to explore opportunities for collaboration on research and doctoral training with leading Russian universities.

2015 年，理大加入「中俄工科大學聯盟」，積極發掘與俄羅斯頂尖大學在科研與培育博士生方面的合作機會。

Nazarbayev University  
納扎爾巴耶夫大學



In July 2017, PolyU's President exchanged with the presidents of Al-Farabi Kazakh National University, Nazarbayev University and Nazarbayev Intellectual Schools in Kazakhstan, and signed a Memorandum of Understanding with Nazarbayev University to foster long-term academic and research collaboration as well as student and staff exchange.

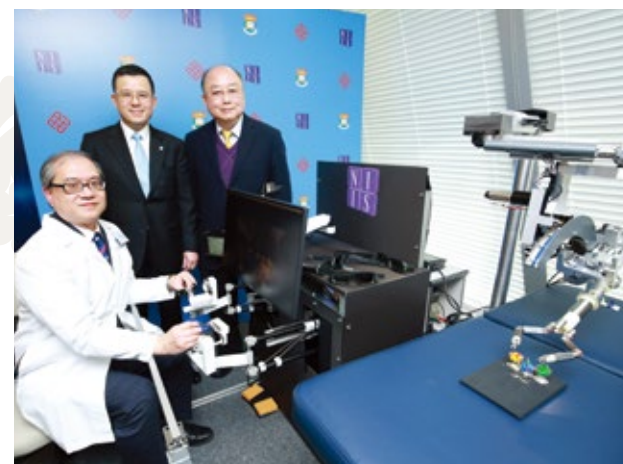
2017 年 7 月，理大校長與法拉比哈薩克國立大學、納扎爾巴耶夫大學和納扎爾巴耶學校的校長會面交流，並與納扎爾巴耶夫大學簽署合作備忘錄，推動長遠學術和科研合作，以及師生交流。

## Extensive Local Network 拓展本地網絡

Locally, PolyU has established fruitful partnerships in different sectors. Through close collaboration with institutions, the government and industry, PolyU adds practical value and significance to the innovations it develops.

在香港，理大與不同界別建立夥伴關係，透過與學術機構、政府和業界的緊密合作，為創新發明賦以實用價值和重大意義。

The University of Hong Kong  
香港大學



In 2016, in partnership with the University of Hong Kong, and drawing on its experience designing precision tools for space exploration, a PolyU team engineered a revolutionary robotic system for single-incision or incisionless surgery.

2016 年，理大團隊應用在設計航天精密儀器方面的經驗，並夥拍香港大學，開發革命性的機械人系統，用以單一切口或無切口的外科手術。

University-Government-Industry Consortium for Sustainable Urban Development  
可持續城市發展大學－政府－業界三方聯盟



In July 2016, PolyU endeavoured to establish the University-Government-Industry Consortium for Sustainable Urban Development, a cross-sector platform for developing and implementing technologies and solutions for smart and sustainable cities.

2016 年 7 月，理大倡議成立「可持續城市發展大學－政府－業界三方聯盟」，透過這個跨界別平台為智慧 和可持續發展城市開發及應用新技術與方案。

Queen Elizabeth Hospital  
伊利沙伯醫院



PolyU and Queen Elizabeth Hospital developed a model in 2017 to simulate a minimally invasive procedure that substitutes for open-heart surgery by repairing rather than replacing the aortic valve, thereby reducing risk and improving healthcare quality.

理大與伊利沙伯醫院於 2017 年成功研發一個模型以模擬微創程序代替開胸手術，採用修補的方法代替更換主動脈瓣外科手術，有助減低風險並提升醫護水平。

Sino Green, Arup and Water Supplies Department  
信和綠色、奧雅納工程顧問及水務署



PolyU worked with Sino Green and Arup to install inline micro hydropower system in high-rise residential buildings' water supply pipelines for generating hydroelectricity. The system was jointly developed by the University and the Water Supplies Department.

理大與信和綠色及奧雅納工程顧問合作，在高層住宅大廈供水喉管安裝管內微型水力發電系統，以產生水力能源。該系統由大學與水務署共同研發。