

**PRESIDENT'S
OVERVIEW**
校長報告



**SHAPING
THE FUTURE**
成就未來

PolyU is a university committed to turning today's potential into tomorrow's accomplishments. During the year under review, we embedded this ideal into a new brand promise — **Opening Minds • Shaping the Future** — that describes our efforts to empower our students, staff and graduates to make their dreams a reality.

We are well aware of the problems our community, our nation and our world face today and will face tomorrow. We address climate change and support disaster recovery. We find cures and fight poverty. We explore ways to enhance safety and boost efficiency. We open up new horizons in space and at nano-level.

All change begins with a dream. PolyU encourages the university community to face up to the challenges of our complex world and follow their dreams in the spirit of "doing well and doing good". This, in turn, will help to shape the next generation as drivers of innovation that brings positive change, and as ethical and socially responsible leaders who will play an instrumental role in advancing our society. We count on them for a sustainable and prosperous future.

Shaping the leaders of the future

The University is keen to shape the next generation who do not only possess the skills and knowledge to excel in their chosen profession, but are also ready to serve the global community with a strong sense of social responsibility. Supported by the breadth and depth of our curriculum, PolyU's innovative education model includes our Service-Learning and Work-Integrated Education initiatives.

理大致力開發今日的潛能，以期共享明天的碩果。年內我們將這份信念體現於我們對教研工作所作的新承諾 — 「**啟迪思維 • 成就未來**」。我們努力不懈裝備學生、教職員和畢業生，幫助他們實現夢想。

我們充份理解現時及將來社會、國家和世界面對的問題。我們要應對氣候變化，支援災後重建；我們要悉心研發有效藥物，對抗貧窮困擾；我們要探究如何保障安全，提升效益。我們的研究既要窮究浩瀚的太空，也要兼顧納米的細微。

所有改變都始於夢想。理大鼓勵大學社群勇於面對複雜世界的挑戰，秉持「創富創善」的理念，追尋夢想。這有助於培育下一代成為創新先驅，並為社會帶來正向改變，成為立於仁德、懷抱社會責任感的領導人才，在推動社會進步中擔當重要的角色。我們期盼年青人為可持續發展和繁榮的未來作出貢獻。

悉心栽培明日領袖

大學致力培育下一代，除了具備所選專業的技能 and 知識之外，亦肩負社會責任，懷抱服務社群的心志。在既廣且深的課程以外，理大的創意教學模式亦包括服務學習和校企協作教育。



The University staunchly advocates Service-Learning to provide opportunities for students to gain a deeper understanding of society and those in need. All PolyU undergraduate students will have to take a mandatory three-credit Service-Learning subject through which they will apply their professional knowledge to serve the community. I am proud to report that the total number of Service-Learning subjects has increased to 58 during the year, taken by more than 3,000 students. Many of our students have undergone life-changing experiences through participating in a variety of projects around the world.

After our service trip to Myanmar, for example, one student came to believe that service is 'sharing', not 'giving'. I am sure that student's passion to share his love and dreams with the underprivileged will continue to grow in the days and years ahead.

Closer to home, biomedical engineering students who worked with rehabilitation centres in Guangdong have also been inspired. Having provided prosthetic and orthotic services for children with cerebral palsy, they returned with a greater commitment to the profession they had chosen. In all our Service-Learning projects, the benefits flow both ways.

These are not isolated examples. Many students, through their rating of the learning outcomes of this subject, have told us that they understand the real world better and are more confident that they could help make a positive change. They have also developed their leadership, communication and problem-solving skills.

大學提倡服務學習，並為學生提供機會更深入地了解社會和有需要人士。所有理大本科生必須修讀三個學分的服務學習科目，藉此善用其專業知識，服務社會。我喜見年內服務學習科目已經增至五十八科，共有三千多名學生修讀。很多學生參與世界各地多元化的服務學習項目後，均經歷了改變生命的難忘體驗。

例如一位學生在完成緬甸服務學習之旅後，理解到服務其實是「分享」而非「施予」。我深信他盼望與弱勢社群分享愛與夢想的熱誠將繼續隨年月而增長。

在廣東省康復中心工作的學生，同樣透過服務得到啟發。他們經過為腦癱兒童提供義肢和矯形服務後，對所選擇的專業更加投入。服務學習計劃確實讓學生與受惠者雙方都有所得著。

以上都不是個別的例子。很多學生透過對服務學習成效的評估告訴我們，他們對現實世界已有更深入的了解，並更有信心自己可以帶來正向改變。他們的領導才能、溝通技巧和解難能力亦得以提升。





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理大致力開發今日的潛能，以期共享明天的碩果。



Shaping a better future through innovation

One of the hallmarks of PolyU is its ground-breaking research that helps to save people's lives and create a more sustainable future.

In research led by Professors Larry Chow and Bill Chan of the Department of Applied Biology and Chemical Technology, a PolyU team developed an inhibitor called Apigenin Flavonoid Dimer that reverses cancer drug resistance in patients suffering from breast cancer. Using a nutrient found in fruits and vegetables, the inhibitor can prevent drug rejection by cancer cells and offer better treatment outcomes. More importantly, this new inhibitor is ten times more potent and three times safer than the best inhibitor currently available.

Another medical breakthrough made during the year was a computer-aided system that accurately diagnoses acute strokes shortly after their onset. Developed by Dr Tang Fuk-hay and his team at the Department of Health Technology and Informatics, the system combines artificial intelligence and a sophisticated algorithm to detect ischemic or haemorrhagic stroke. The system can make diagnoses with 90% accuracy.

Our researchers are also developing innovative technologies that will help to create a greener world. These include a novel energy storage device developed by Prof. Daniel Lau and Dr Yuan Jikang of the Department of Applied Physics, which makes use of synthetic manganese dioxide to produce ink for wearable devices and radio-frequency identification systems.

非凡創意改善將來

理大其中重要的一環是創新科研，這不但有助拯救生命，亦創造可持續發展的未來。

在應用生物及化學科技學系周銘祥教授及陳德恒教授帶領的研究中，理大團隊研發出名為「芹菜素黃酮類二聚體」的抑制劑，可逆轉乳癌患者服用藥物之抗藥性。這種抑制劑由蔬果的一種天然營養素製成，能夠防止癌細胞抵抗藥物，並達致更佳的治療效果。更重要的是，與現時市面最有效的抑制劑比較，這種嶄新抑制劑的逆轉抗藥性效力高出十倍，安全性更高出三倍。

電腦輔助偵測中風系統是理大年內另一項醫學突破，它能夠在急性中風病發後在極短時間內作出診斷。該系統由理大醫療科技及資訊學系鄧福禧博士及其研究團隊研發，結合人工智能和精密的運算技術，可偵測缺血性中風或充血性中風，診斷準確度高達百分之九十。

我們的科研人員亦為建立綠色世界而開發了不少創新科技，其中包括由應用物理學系劉樹平教授及袁嵇康博士研發的新型儲能裝置，利用化學合成的二氧化錳製造墨水，應用於可穿戴設備和射頻識別系統。



Also making inroads into green technology are Dr Yan Feng and his team of the same department, who developed the first-ever semi-transparent perovskite solar cells with graphene electrodes. Distinguished by their high power conversion efficiencies, the new solar cells can absorb light from both sides to significantly increase the surface area for collecting solar energy on windows, facades, louvers and building rooftops.

同一學系嚴鋒博士及其團隊亦在環保科技領域取得突破，他們成功首創利用石墨烯配合鈣鈦礦，開發半透明太陽能電池。這種電池的特點是有較高的能量轉換效率，並可從底面兩邊吸光，大大增加了窗戶、外牆、天窗和大廈屋頂等建築結構吸收太陽能的面積。



Shaping our world through social good

In the face of pressing world issues, we believe that the public good can best be served by a concerted global effort. PolyU can contribute to these by mobilizing like-minded universities to share expertise, experience and creativity. With this in mind, we established the University Social Responsibility Network with eleven universities in Australia, the Chinese mainland, Israel, Japan, Korea, the United Kingdom and the United States. The objective is to pool ideas and resources for developing collaborative projects that advance higher education as a catalyst for social change.

建設社會 塑造世界

面對全球各種迫切的議題，我們認為全球同心協力是締造公眾福祉的最佳方法。因此，理大鼓勵志同道合的大學一起分享專業知識、經驗和創意，為此目標作出貢獻，並與來自澳洲、中國內地、以色列、日本、韓國、英國及美國的十一所大學攜手成立「大學社會責任網絡」，目的是集結意見和資源，開發協作項目，讓高等教育界成為推動社會改變的催化劑。



In January 2015, PolyU hosted the Empowering Global Food Safety event for discussing the latest challenges in global food safety and sharing best practices to safeguard public health. Concurrently, the University initiated the establishment of a Food Safety Consortium as a unique technology exchange platform for assisting the industry and community to tackle food safety issues, supported by PolyU's technologies.

Our initiatives are manifestations of the University's commitment to engaging the university community, the nation and the world to address world challenges and shape a better future.

Shaping the future of our University

As much as PolyU is concerned about the world around us, we have not lost sight of the advancement of the University. As staff members are key players in shaping the future of PolyU, we facilitate their development and recognize excellence in performance. During the year, we have refined the operation workflow of our framework for the appointment, promotion and retention of academic staff. We have also developed the framework for our non-academic staff in order to provide them with career development opportunities in a more structured manner.

While PolyU strives to shape the future through education, research and knowledge transfer, its evolution and advancement is shaped by the concerted efforts of students, staff and alumni. I would like to take this opportunity to thank the University Council, Court, staff, students, alumni and our partners for their continuing support. I pledge to work closely together with the entire PolyU community to forge ahead and stride forward into a brighter future.



Timothy W. Tong, *Ph.D.*
President

December 2015

2015年1月，理大舉辦以「全球食品安全」為題的活動，探討現時全球食品安全面對的挑戰，以及分享保障公共衛生的最佳範例。理大同時發起成立「食品安全聯盟」，並以此作為科技交流平台，以期藉著理大的科研技術，協助業界及社區解決食品安全問題。

我們倡議的各項新猷，正好反映理大矢志推動大學社群、國家及世界各地積極參與，一起應對全球挑戰及建設更美好的將來。

攜手共建理大未來

理大關心世界之餘，亦不忘推動本身更上層樓。由於教職員在建設理大未來的過程中擔任重要的角色，我們正致力促進他們的發展，並表彰優秀的表現。年內，我們完善了聘任、晉升和挽留學術人員的程序。我們同時重新規劃非學術人員的事業發展進程，長遠而言，改善他們的晉升前景。

理大積極透過教育、科研及知識轉移成就未來，而大學的演變和進步則有賴學生、教職員和校友的群策群力。我衷心感謝校董會、大學顧問委員會、教職員、學生、校友和合作夥伴的長久支持，並承諾與理大同仁繼續並肩攜手，讓理大邁向更燦爛的明天。



校長
唐偉章, *Ph.D.*

2015年12月

