The Hong Kong Polytechnic University
香港理工大學

Faculty of
Applied Science & Textiles
應用科學及紡織學院

NEWSLETTER

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PolyU

Opening Minds • Shaping the Future • 啟迪思維 • 成就未來

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Editorial Board

Dean's Message 院長的話

Welcome to the inaugural issue of the FAST newsletter. It is with great pleasure that we begin highlighting the efforts of the Faculty of Applied Science and Textiles (FAST) in striving for excellence in teaching and research, and disseminating the latest events, staff and student sharing through this platform.

2017 is definitely a memorable year, it marks the 80th anniversary of The Hong Kong Polytechnic University (PolyU). FAST is sharing the joy by holding the Nobel Laureate Lecture Series and organizing over 30 lectures of the Distinguished Chinese Scholar Lecture Scheme. I am also excited to share with you that 2017 is the 60th anniversary of our Institute of Textiles and Clothing, and the 45th anniversary of the Department of Applied Mathematics. These milestones are providing invaluable opportunities for our staff, students and alumni to rally together to organize celebratory events and activities. You will find details of these happenings in this newsletter and you are most welcome to participate.

I strongly believe that teaching and research innovation are equally important in leading FAST towards success. Our professional teachers will share their invaluable experiences and teaching philosophies here, as well as the research breakthroughs that will shape Hong Kong's future.

FAST has integrated the all-round development of students into its curricula. Besides classroom learning, students are given rich opportunities to join exchange programmes and industry placements, with a footprint extending from local to international locations such as mainland China, Australia, Canada, France, Germany, the US and the UK. In these pages, students will share and reflect on the experiences that have affected their personal growth. We are also proud to carry the words of Applied Physics alumnus Mr Stephen Au Ling-ming, who received the Outstanding PolyU Alumni Award 2017 here. Our congratulations go out to him!

I hope that you enjoy our newsletter. To proactively reach out to students and the general public, FAST will launch a Facebook page very soon. So please stay tuned!

Prof. Wong Wing-tak,
Chair Professor of Chemical Technology
Dean, FAST

歡迎閱讀應用科學及紡織學院首期學院通訊。我們欣然和大家分享本院教員為追求卓越教學與研究所付出的努力，並透過這個平台發佈最新消息、活動盛事和師生分享。

2017年絕對是值得紀念的一年。為慶祝理大八十週年，學院舉辦諾貝爾獎學人講座系列及超過三十場傑出中國學者學術講座來分享這份榮耀和喜悅。此外，今年也是本院紡織及製衣學系創辦六十週年、及應用數學系創辦四十五週年紀念。一連串的慶祝盛事和活動讓本院師生和校友能共聚一堂，共賀誌慶。詳情請參閱本通訊，歡迎大家踴躍參與。

我深信，在推動學院邁向成功的道路上，教學與研究創新同樣重要。學院的專業教師會在此分享他們的寶貴經驗和教學理念，以及成就香港未來的創新研究。

學院已將學生的全人發展融入到學院課程之中。除課堂學習外，學生還獲得豐富機會參加交換計劃、企業實習和考察活動，包括前往中國內地，以及遠赴澳洲、加拿大、法國、德國、美國和英國等國家。在本刊中，學生將會分享及反思他們個人成長的經歷。我們亦感到自豪的是，本期收錄了應用物理學系校友、2017年「傑出理大校友選舉」得獎者區令明先生於學院成長的點滴及如何奠定其日後的卓越成就。恭喜他獲此殊榮！

希望大家喜歡我們的學院通訊。為加強與學生及市民大眾作溝通交流，學院將於不日推出Facebook專頁。敬請期待！

應用科學及紡織學院院長
化學科技講座教授
黃永德教授

Our Departments 部門概覽

The Department of Applied Biology and Chemical Technology (ABCT) is a multidisciplinary department with core expertise in biotechnology, chemical technology, food science and safety.

Our research teams have been active in various international research fields including Biopharmaceuticals, New Materials and Sustainable Development, and Food-Safety Control, and the success of their knowledge transfer is evident from their filing of patents for anticancer investigational new drugs and the establishment of several State/City Key Laboratories and Cancer Drug Development Centers, and a Food Safety and Technology Research Centre.

Our academic programmes are internationally accredited from professional bodies and academic societies. The BSc (Hons) in Chemical Technology programme has been accredited by the Royal Society of Chemistry; the BSc (Hons) in Food Safety and Technology programme has been accredited by both the Institute of Food Technologists and the International Union of Food Science and Technology; and the BSc (Hons) in Applied Biology and Biotechnology programme has been recently accredited by the Royal Society of Biology.

This September, we will launch the BSc (Hons) in Analytical Sciences for Testing and Certification programme. We hope that the programme will nurture competent chemical analysts and accreditation officers for the society.

應用生物及化學科技學系 (ABCT) 是一個以生物科技、化學科技、食品科技及食品安全為科研核心的綜合學系。

本系的科研團隊活躍於國際多個研究領域，包括生物製藥、新材料、可持續發展及食品安全監控等，並已成功申請多項全新抗癌試驗藥物專利並創立了多個國家級/市級重點實驗室、癌症藥物研發中心、食品安全及科研中心，堪稱學以致用的典範。

本系課程獲各大國際專業機構及學術團體認證。本系的化學科技（榮譽）理學士課程榮獲英國皇家化學會認證，食品科技與食品安全（榮譽）理學士課程則榮獲美國食品工藝師學會及國際食品科學技術聯合會認證，而應用生物兼生物科技（榮譽）理學士課程已獲得英國皇家生物學會認證。

本年九月，本系將推出檢測及認證分析科學（榮譽）理學士課程，藉此為社會培養德才兼備的化學分析師及認可主任。

Prof. Lo Chun-Lap Samuel,
Professor & Head of Department

盧俊立教授
應用生物及化學科技學系教授及系主任

The Department of Applied Physics (AP) was founded in 1987 after the splitting of the Department of Applied Science. Under the academic themes of applied physics and engineering physics, AP continues to cultivate the next generation of scientific and innovative talents. In this 30th anniversary, the department now boasts a dynamic team of young staff, striving for excellence in teaching, research and professional services.

Focusing on materials science, AP conducts high-impact research in the following five major areas: (1) energy materials and devices, (2) nanomaterials, (3) photonic materials and devices, (4) smart materials and devices and (5) theoretical and computational physics. According to the latest Research Assessment Exercise conducted by the Hong Kong Research Grants Council, AP has been classified as the second best among all physics department in Hong Kong and the best in materials science.

In addition to achieving excellence in research publications, our research teams have received more than HK$60 million in external research grants since 2011. The Department has also contributed significantly to the establishment of several research facilities in PolyU such as the University Research Facility in Material Characterization and Device Fabrication (UMF), which consists of a Center for Electron Microscopy, a Materials Research Center and a Class-100 Clean Room.

AP is also devoted to providing high-quality education. Our staff have received multiple awards for enhancing physics learning in recent years, including the establishment of the first online remote laboratory platform in Asia.

應用物理學系 (AP) 創立於1987年，秉承了前身應用科學系的優良傳統，以應用物理及工程物理為學術主題培育下一代科學及創新科技人才。現時，學系擁有一支年輕又充滿活力的教職團隊，致力提升教學、科研及專業服務質素。

本系專注於材料科學研究，並重點研究能源材料及裝置、納米材料、光電材料及裝置、智能材料及裝置以及理論與計算物理五大主要領域。在香港研究資助局最新一期科研評估中，本系的科研獲得極高評分，其中在材料研究領域及全港的物理學系中分別包攬第一及第二位。

2011年至今，本系優秀的科研項目已獲得逾六千萬港元的校外研究資助。此外，本系還致力為理工大學創建研究設施，而近期更開設了中心實驗室 — 材料與器件中心實驗室，該中心包括電子顯微鏡中心、材料研究中心及屬等級100的無塵室。

本系教職員以優質教育為己任，除了致力提升學生對應用物理的興趣、專業知識及技能，近年更憑藉提升物理教學質素而榮獲多項獎項，包括創立亞洲首個遙距實驗平台。

Prof. Daniel Lau,
Professor & Head of Department

劉樹平教授
應用物理學系教授及系主任

The Department of Applied Mathematics (AMA) offers a broad range of undergraduate and postgraduate programmes in applied mathematics and statistics, emphasizing their applications in finance, investment, risk analysis, actuarial science, decision science and operational research. The programmes develop students' mathematical and statistical skills, and their ability in quantitative analysis and critical thinking, which enable them to pursue careers in finance and mathematical sciences.

Our main research areas are operations research and optimization, applied statistics and financial mathematics, and engineering and computational mathematics. To create synergies and foster research collaboration in various areas, AMA has partnered with many renowned research institutes for interdisciplinary research projects. The AMSS-PolyU Joint Research Institute for Engineering and Management Mathematics represents AMA's first collaboration with the Academy of Mathematics and Systems Science of the Chinese Academy of Sciences in the area of engineering and management mathematics.

The Joint Research Centre established by PolyU, HKBU and Shandong University aims to promote collaboration on financial mathematics research, and foster technical exchange between mainland China and Hong Kong. AMA also established the first and only Student Chapter of the Society of Industrial and Applied Mathematics in Hong Kong in 2013.

In 2017, the QS World University Ranking rated PolyU in the world's top 100 for mathematics and in the top 44 for statistics and operational research. The University is also listed 67th in the Best Global Universities in 2017 for mathematics by the U.S. News rankings.

應用數學系 (AMA) 開辦了一系列應用數學及統計的學士學位及授課式深造課程，課程設計著重於應用相關知識解決如金融、投資、風險評估、精算、以至決策及運籌等不同範疇的問題。課程旨在培訓學員的數學與統計技能，以及量化分析與批判思考的能力，為日後從事金融及與數理相關之事業發展奠定基礎。

本系以運籌學及優化、應用統計及金融數學、工程及計算數學為主要研究領域。為達致協同效應，並促進跨領域科研合作，應用數學系與眾多知名科研機構開展了跨學科研究合作項目。「數學與系統科學研究院 - 香港理工大學聯合研究所」便是本系與中國科學院數學與系統科學研究院在工程及管理數學領域的首個合作項目。

此外，理大與香港浸會大學、山東大學聯合創辦了聯合研究中心，旨在促進內地與香港的金融數學研究合作與技術交流。2013年，本系更成立了香港首個及唯一一個美國工業與應用數學學會學生分會 。

在2017年QS全球大學排名中，理大在數學與統計及運籌的分科排名中，分別位列全球首一百名與四十四名。此外，理大的數學系亦榮登U.S. News Rankings 2017年度全球最佳大學的第六十七位。

Prof. Chen Xiao-jun,
Chair Professor & Head of Department

陳小君教授
應用數學系講座教授及系主任

The Institute of Textiles and Clothing (ITC), established in 1957, has a proud and illustrious history. It has been recognized as a world-class educational institution with the vision of becoming the leading Asian institution in fashion, textiles and design education, research and partnerships.

The ITC takes pride in offering high-quality academic programmes that nurture highly sought after fashion professionals and leaders. Over the years, the ITC has trained many talented and visionary designers, technologists along with managers and directors, enabling them to realize their full potential and make significant contributions to the fashion industry in Hong Kong and beyond.

At the ITC, we conduct both fundamental and applied research in fashion technology, fashion design and fashion business, which has practical value for society. By forming close partnerships with businesses and industry, we are weaving a growing global network that will further facilitate our educational and research development and enhance our knowledge exchange.

We determined to play a key role in providing high-quality education geared to the new demands of an increasingly knowledge-driven economy, and will continue to strive for excellence in making groundbreaking contributions to the development of the fashion and textiles industry.

紡織及製衣學系 (ITC) 創立於1957年，擁有一段光輝燦爛的歷史。作為公認的世界級教育學院，本系致力成為融匯時尚、紡織、設計教育、科研與合作的亞洲領先學府。

本系透過優質學術課程，培養備受業界認可的時尚專業人士及領袖。多年以來，本系培養了眾多才華橫溢、高瞻遠矚的設計師、工藝師、企業經理及高管，助其充分發揮才幹，為香港及世界時尚行業作出重要貢獻。

本系在時裝科技、時裝設計及時裝商業領域進行了大量基礎及應用研究，憑藉務實治學發揮社會價值。除與業界保持密切合作之外，本系緊貼本土及全球動態，不斷提升教學效益，拓展全球網絡，積極促進教育科研發展以及學術交流。

本系將繼續肩負優質教育之重任，以滿足日益提升的知識經濟需求，為時尚及紡織業的發展作出卓越貢獻。

Prof. John H. Xin,
Chair Professor & Head of Department

忻浩忠教授
紡織及製衣學系講座教授及系主任

Anniversary Celebration

2017 is important for PolyU as the University is celebrating its 80th anniversary. To share the joy at this memorable time, FAST has launched a series of celebratory activities since December 2016 to draw together our PolyU family and the wider community.

Apart from inviting over 30 academicians from the Chinese Academy of Sciences (CAS) to PolyU, this year FAST has proudly welcomed many scholars who are distinguished in their fields. In March and April, we enjoyed two stimulating and insightful lectures by Prof. Randy Schekman (2013 Nobel Laureate in Physiology or Medicine) and Prof. Dan Shechtman (2011 Nobel Laureate in Chemistry). This November we will be privileged to host lectures by Prof. Johann Deisenhofer (1988 Nobel Laureate in Chemistry) and Prof. Aaron Ciechanover (2004 Nobel Laureate in Chemistry).

Many more celebratory activities are planned, so please stay tuned.

^ *Distinguished Chinese Scholar Lecture by Prof. BAI Chunli, the President of the Chinese Academy of Sciences (CAS)*

< *Nobel Laureate Lecture by Prof. Randy Schekman*

> *Nobel Laureate Lecture by Prof. Dan Shechtman*

理大80週年校慶

2017年對理大而言是非常重要的一年，這一年，理大迎來了八十週年校慶。為了紀念這個重要的里程碑，應用科學及紡織學院於2016年十二月推出了一系列慶祝活動，讓理大親友和社會各界歡聚一堂。

除了三十多名來自中國科學院 (CAS) 的院士赴理大講授外，今年，學院亦有幸邀請到多名在各自領域出類拔萃的學者。三月和四月期間，我們舉辦了兩場有啟發性及深刻洞見的講座，講者為 Randy Schekman 教授（2013年諾貝爾生物學或醫學獎得主）和Dan Shechtman 教授（2011年諾貝爾化學獎得主）。我們亦非常榮幸能邀請到Johann Deisenhofer 教授（1988年諾貝爾化學獎得主）和Aaron Ciechanover教授（2004年諾貝爾化學獎得主）於今年十一月赴本院舉行講座。

更多慶祝活動正在籌備當中，敬請期待！

AMA's 45th Anniversary

In 2017, we are celebrating the 45th anniversary of the Department of Applied Mathematics. The Department has gone through an evolution parallel to Hong Kong's economic transformation from manufacturing to services. By experiencing a multitude of natural changes and overcoming many challenges, we have become a major international mathematics department that focuses on application-oriented education and research. In the last 45 years, we have nurtured more than 6,000 graduates who have contributed to society with their knowledge. Our research in mathematics and statistics has always achieved remarkable recognition and consistently puts us at the top of world university rankings.

To commemorate our progress through 45 years and reconnect with our alumni, a series of celebratory activities are being held throughout the year:

- The Third International Conference on Engineering and Computational Mathematics (ECM 2017)
- PolyU 80th Anniversary / AMA 45th Anniversary Distinguished Lectures and Workshops Series
- Home-coming tea-gatherings
- Outings: Hong Kong UNESCO Global Geopark and Sha Tau Kok Organic Farm visit
- Hiking tours and visits to historic sites
- Anniversary Publication
- Anniversary Dinner, and more....

Join us to celebrate AMA's 45th anniversary! Stay tuned at www.polyu.edu.hk/ama.

Congratulations

to AMA's teaching team and their collaborators from PolyU, HKU, CUHK and BU for being awarded HKD15 million in funds from UGC for their teaching and learning proposal entitled "Developing Active Learning Pedagogies and Mobile Applications in University STEM Education".

AMA與理大、港大、中大及浸大組成的教學團隊成功獲香港教資會資助1,500萬港元的項目基金，用以發展大學STEM教育的主動學習教學法及其移動應用。

應用數學系四十五周年紀念

2017年是應用數學系成立四十五年的重要日子。隨著香港經濟轉型，從製造業及工業城市，至今發展成為國際商業金融中心，學系一直與時並進，配合社會發展步伐培育人材。經歷不同時代變遷、克服了各種挑戰，今天我們已經蛻變成為世界著名的應用數學系，教育與科研工作皆以應用為本。在這四十五年間，我們培育了超過六千名畢業生，他們投身於各行各業，為社會發展貢獻所學。此外，理大應用數學系在數學及統計領域上的科研成果亦獲得多方肯定，經常名列世界大學分科排名榜，成績有目共睹。

為慶祝成立四十五周年及加強學系與校友間之連繫，應用數學系在年內舉辦及籌備了多項慶祝活動，包括：

- 第三屆工程及計算數學國際學術會議 (ECM2017)
- 理大八十周年校慶暨應用數學系成立四十五周年誌慶傑出講座及學術研討會
- 周末茶聚
- 香港地質公園「馬屎洲」、沙頭角農莊一天遊
- 登山遠足及參觀歷史名勝
- 出版周年紀念特刊
- 週年晚宴, 尚有更多精彩活動...

摯誠邀請校友及友好們一同參與我們的慶祝活動，分享應用數學系四十五年誌慶的喜悅。請瀏覽www.polyu.edu.hk/ama，了解更多活動詳情及最新消息。

ITC's 60th Anniversary

The Institute of Textiles and Clothing (ITC) is a pioneer of tertiary education in fashion and textiles in Hong Kong. Since 1957, ITC has offered comprehensive and professional academic programmes to those wanting to pursue careers in the dynamic industry. Apart from nurturing professional talents, leading edge research into fashion technology, fashion design and fashion business, and a wide range of professional consultancy services generate a significant contribution to and impact on society.

In celebration of ITC's 60th anniversary this year and to transforming today's potential into tomorrow's accomplishments, ITC has instigated the following eight initiatives:

1. Enhancement of ITC Scholarships and the Student Exchange Programme
2. E-Learning and Online Course Development
3. Establishment of the ITC Fashion Store
4. A Blueprint for Future ITC Fashion Shows
5. Fashion Gallery on campus and beyond
6. Establishment of the Smart Textiles and Apparel Research Centre
7. A Showroom: Innovation and Impact
8. A Platform for International Conferences and Knowledge Exchange

With continuous support from the government and industry, ITC's professional education, research insights, ground-breaking discoveries and worldwide connections will enhance the development of the fashion and textile industry, and bring about a sustainable and prosperous future for all.

Please visit the ITC website, YouTube channel and social media platforms for the latest information.

www.polyu.edu.hk/itc

紡織及製衣學系
六十周年慶典

作為本地紡織及服裝設計教育先驅的紡織及製衣學系，自1957年成立至今，致力為有志投身於紡織及製衣行業的人士，提供全面和專業的學術課程。除了培育人才以外，學系在時裝科技、時裝設計及時裝商業上的尖端研究，以及多方面的專業顧問服務，都為社會作出重要的貢獻和影響。

為慶祝成立六十周年，以及將現有的潛能轉化為未來的成就，紡織及製衣學系計劃了以下八項提案：

一、加強學系獎學金和學生交流計劃
二、開辦電子學習和網上課程
三、成立學系時裝商店
四、制訂學系時裝展藍圖
五、擴展校園內的時裝展覽館
六、成立智能紡織及成衣研發中心
七、建立創意展廳
八、建立國際會議和知識交流平台

在政府和業界的支持下，以及學系的專業教學、嶄新的科研視野、具開創性的研發和國際聯繫，紡織及製衣學系深信香港的時裝及紡織業可更上一層樓，為業界和社會帶來可持續及繁榮的將來。

請密切留意學系網頁及社交平台，以獲取最新資訊。

Solving Big Problems

– Interview with ***Prof. Larry Chow,***
Professor of the Department of Applied Biology and Chemical Technology

When Professor Larry MC Chow, Professor at the Department of Applied Biology and Chemical Technology was asked why he became interested in cancer drug resistance, he explained that when he took up his position at PolyU, the topic was widely discussed but no one had found a solution. "It was like, everybody's talking about the weather but nobody's doing anything about it", he explained.

But Professor Chow, who began his studies at the then Hong Kong Polytechnic with a Diploma in Medical Laboratory Science, had already cloned the first drug resistance gene in the parasite Leishmania while undertaking his ScD studies at Harvard University. This lead Professor Chow to continue his work with applying his expertise in parasite drug resistance to cancer.

The reversal of cancer drug resistance represented "a big challenge for me", he said. Through a collaboration with Professor Tak-hang Chan, a chemist in the Department, Professor Chow developed a compound that blocked the protein-based pumps that would otherwise expel anti-cancer drugs out of resistant cancer cells. Such discovery has been patented and licensed to a company for further clinical studies.

Professor Chow's more recent breakthrough is developing new drugs for parasitic diseases, which is a major health concern in developing countries. Patients suffering from leishmaniasis, an ulcer-related disease, have to spend up to 4 weeks in hospital for treatment, or cannot get access to beds/ hospitals which can severely limit their chances of successfully combating the disease. With Professor Chow's new drug

discovery, patients will be able to receive treatment at home in the future.

With a relatively young research group under his leadership, Professor Chow offers them valuable advice. "If you want to solve big problems", he tells them, "you need to have an interdisciplinary approach. The best way is to be humble and admit that you don't know everything". And he reminds his students that studying is not just for self-advancement, but it could also provide many benefits to society.

解決重大難題

— 應用生物及化學科技學系教授
周銘祥教授*專訪*

每當被問及**為何會對抗癌藥物抗藥性產生興趣**時，應用生物及化學科技學系周銘祥教授便會說，他於理大就職時，大家都在廣泛討論這個話題，但沒有人找到對策。他解釋說：「感覺就像每個人都在談論天氣，但沒有任何人對它做些什麼。」

然而，曾在當時的香港理工學院就讀、獲頒發醫療化驗科學文憑的周教授，早於哈佛大學攻讀博士學位時，便已經克隆出寄生蟲的第一個抗藥基因。這令他把寄生蟲抗藥原理上的經驗應用到癌症研究上。

對他而言，逆轉抗癌藥物的抗藥性是一個「巨大的挑戰」，通過與學系內的另一名藥物化學專家陳德恆教授的合作，周教授的團隊開發出一種能阻止P糖蛋白從抗藥性癌細胞中把藥物外排的複合物。其中所涉及的專利技術已經授權一間國際藥物公司，進行下一步的臨床試驗及開發。

周教授最近取得的一項突破亦與他在寄生蟲抗藥性方面所做的工作息息相關。寄生蟲的抗藥性是發展中國家擔憂的問題。黑熱病（一種潰瘍相關疾病）患者曾一度被迫住院達四週，這嚴重影響了那些不能住院的患者戰勝疾病的機會。現在，透過服食由周教授的團隊開發的藥片，他們只需在家便能得到醫治。

周教授帶領著一個特別年輕的研究團隊，他總是很謹慎地給予他們有用的意見，並告訴他們：「要想解決重大難題，需運用跨學科方法。最好是保持謙遜，承認你並非全能。」周教授還提醒他的學生，學習不單是為了自我發展，更是為了造福社會。

Humble Achiever

*– Interview with **Prof. Huang Jian**,*
Chair Professor of Applied Statistics and Financial Mathematics

Professor Huang Jian is a relatively new arrival at the Department of Applied Mathematics, having joined as Chair Professor of Applied Statistics and Financial Mathematics from the United States last year. Yet he has wasted no time building on his reputation as a leading statistician, even though he remains humble about his achievements.

When asked what made him a Thompson Reuters Highly Cited Researcher – among the top 1% in his field – for the last two years, Professor Huang pointed to what other people were doing rather than his own success. "I didn't know people would be interested in the work I'm doing. I guess it's pure luck", he said. "They're paying attention to some publications in the area and some of my papers are also gaining attention."

That sort of humility was also in evidence when he explained what led him to statistics in the first place. Having majored in mathematics as an undergraduate in China, he chose an applied mathematics route when impressed by a graduate recruitment talk given by a professor of statistics. After completing his PhD and building a career in the US, he arrived at PolyU in 2016. He is currently developing innovative methods and computational algorithms for the analysis of biomedical big data, such as gene expression data from cancer studies and data from genome wide association studies with human subjects.

Well aware of the difficulties in explaining statistical analysis to people outside his field, Professor Huang listed the capacity to communicate well as one of three key skills that fresh statistics graduates need. The other two were being well prepared with advanced general computational techniques and developing the ability to understand the substantive scientific aspects of the problems to which they apply their methods. "They already have the knowledge", he said, "but they need to be prepared, to have the right mindset". And if Professor Huang is any guide, they could do well to be modest about their accomplishments.

虛懷若谷

— 應用統計及金融數學講座教授
***黃堅教授**專訪*

黃堅教授去年一月從美國赴港，以應用統計及金融數學講座教授身份加入應用數學系。履新不久，黃教授未有怠慢，積極投入新工作。作為世界首屈一指的統計學家，談及其科研成就，黃教授依然態度謙遜。

過去兩年均躋身「湯森路透全球高引作者榜」(Thompson Reuters Highly Cited Researcher)，名列所屬科研領域榜首百分之一，問到黃教授的成功之道，他沒有居功至偉：「我不知道人們會對我做的工作感興趣，這是出乎我意料之外的。統計領域中的一些學術論文大受關注，從而令我的一些學術論文也受到注視，我想這全是運氣使然吧。」

被問到是甚麼引領他踏上統計科研之路，黃教授貫徹其謙虛的態度。在中國內地數學本科畢業後，黃教授在偶然機會下參加了由統計學教授主講的畢業生招聘講座，因而對這門專業留下了深刻印象，於是毅然選擇了應用數學為進修專業。在美國完成博士學位並奠立了事業基礎後，他於2016年加入理大，目前正在研究分析生物醫學大數據（如癌症研究的基因表達數據和人類受試者全基因組關聯研究數據）的創新方法和運算法則。

從事統計研究工作多年，黃教授深知向外行人解釋統計分析結果的困難，因此他寄語應屆的統計學畢業生必須具備良好的溝通能力，此乃從事相關工作必備的三項重要技能之一。另外兩項重要技能包括充分掌握高級的通用運算技巧，以及培養理解能力，幫助他們從實質的科學層面上了解問題所在，從而應用各式統計方法解決之。他表示：「他們已經具備這方面的知識，但仍要做好準備，樹立正確的心態。」相信同學以黃教授為榜樣，定能做到虛懷若谷，實踐抱負。

Putting the pieces together

*– Interview with **Prof. Hao Jianhua**, Professor and Associate Head of Department of Applied Physics*

Manipulating heterostructures at the micro/nano-level is like putting the pieces of a puzzle together, according to Professor Hao Jianhua of the Department of Applied Physics. As a world leader in thin-film and nanoscience research, Professor Hao pieces investigations together into the benefits of heterogeneous thin films and how upconvertion luminescent nanomaterials can be used in biomedicine.

Indeed, shifting disparate pieces into place seems to be a hallmark of Professor Hao's life. Educated in Huazhong in the mainland, he completed a postdoctoral fellowship in the United States before working in Canada and finally settled in Hong Kong. PolyU attracted him because it offered facilities that would allow him to immediately pursue his research interests.

The results have been outstanding. In 2016, he received a Nanoscience Research Leader Award from Cognizure based on publications listed in SCOPUS, the largest abstract and citation database of peer-reviewed literature. With more than 150 publications since he arrived at PolyU in 2006 and over 1,000 citations per year for the last two years, he is listed Top 1% "Most Cited Scientists" in Materials Science around the world from Essential Science Indicators (ESI).

Professor Hao said his research into heterostructured thin films showed the way toward feature-rich electronic and optoelectronic devices that can be "very useful in our future lives". And his focus on upconversion luminescent materials led to the creation of a nano biosensor for the detection of the flu virus that works 10 times faster than conventional methods, which garnered Special Merit Award and Gold Medal with the

Congratulations of Jury at the 45th International Exhibition of Inventions of Geneva.

What, then, ties these strands of research together? Professor Hao stressed the importance of imagination. To achieve breakthroughs across a range of nanomaterials, scientists need to be creative. This he also emphasizes with his students. "I try to stimulate their motivation", he explained, using simple examples to show how the materials can be applied, and "then they become interested in the field". Ultimately, when all the pieces of the materials science puzzle fall into place, society benefits from such efforts.

跨學科研究

— 應用物理學系教授兼副系主任
***郝建華教授**專訪*

對**應用物理學系郝建華教授**而言，操作微納米級異質結構就像將拼圖的碎片拼接在一起。作為薄膜和納米科技領域的研究先鋒，郝教授將對異質薄膜的優勢和上轉換發光材料在生物醫學中的應用方式的研究整合到一起。

事實上，郝教授的人生似乎就是在不停地堆砌碎片。郝教授在內地華中地區接受教育，在美國完成博士後研究項目後赴加拿大工作，最後定居香港。之所以被理大吸引是因為理大的設施能夠讓他立即展開他感興趣的研究。

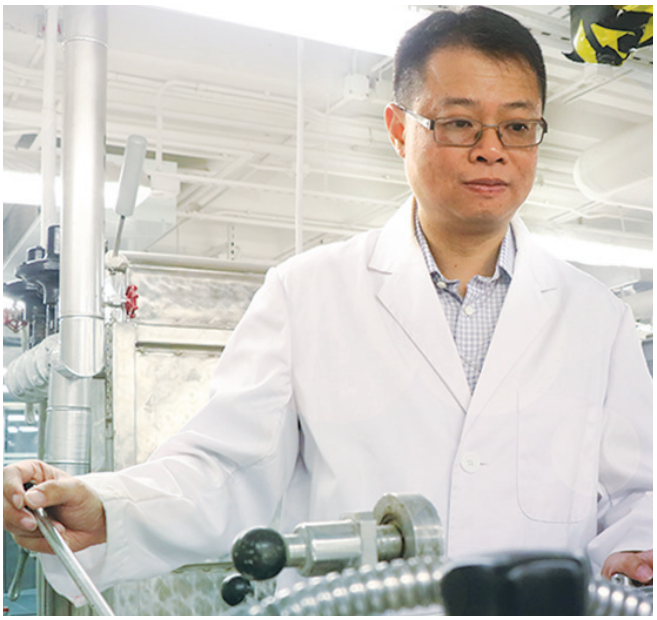
郝教授取得的成績有目共睹。2016年，郝教授因Cognizure根據最大的業內審閱文獻摘要及引用資料庫SCOPUS發文而榮獲納米科技研究領袖獎。自2006年加入理大以來，郝教授發文超過一百五十篇，過去兩年每年的引用量超過千次，並名列前1%最高引用的全球材料科學家。

郝教授表示，他的異質結構薄膜的研究工作為製造功能豐富的電子和光電子裝置提供了方向，這類裝置「在我們未來生活中可以非常有用」。他對上轉換發光材料的專注研究，亦促成了納米生物感應器的誕生，這種感應器可以用來檢測流感病毒，工作速度高達傳統方法的十倍。在日內瓦舉行的「第四十五屆國際發明展」上奪得特別優異獎及評判特別嘉許金獎。

那麼，是什麼將這些研究聯繫在一起呢？郝教授強調了想像力的重要性。為了在一系列納米材料上取得突破，科學家們需要具備創造力。郝教授也和他的學生們強調了這一點。他表示：「我設法激發他們的積極性，然後對這個領域產生興趣」，還用了一些簡單的例子來說明材料是如何被應用的。最後，當把材料科技拼圖砌好後， 社會便會因此而受惠。

A Practical Man

*– Interview with **Dr Chi-wai Kan**,*
Associate Professor of Institute of Textiles and Clothing



Practicality is not something everyone can achieve, but for Dr Kan Chi-wai, Associate Professor in Fashion and Textile Technology at the Institute of Textiles and Clothing, it is second nature. With a career grounded in seven years working as an occupational safety and health officer, he brings a certain pragmatism to his teaching and research.

Having gained his Bachelor and PhD degrees at PolyU, Dr Kan was already familiar with the environment and his appointment allowed him to influence the next generation of fashion and textile talents. When teaching textile chemistry and colouration, he can now draw on his experience to highlight both the commercial benefits of technologies and processes as well as their risks. “When I’m teaching classes, I tell them about safety and health issues related to their work”, he said.

Dr Kan stressed that even in fashion design, students need to use a good deal of technology. He integrates various technologies and design methods into his teaching, not only to pass on knowledge but also to ensure that his students will be able to communicate the associated benefits to their customers in the future.

He is also very keen to encourage that his students have every chance of becoming entrepreneurs, and advises them to quickly gain experience in the fashion and textiles industry after graduation. That, he said, would help them gain the right perspectives to operate their own businesses.

This sort of foresight is also evident in Dr Kan’s research. His work on antimicrobial textiles and liquid repellency has been benefited from his ability to judge what the market wants and adapt accordingly. Explaining that he needed to reduce the amount of carbon used to produce the ultra-liquid-repellent material he developed, he said, “if we want to apply our research to the industry, to the public, we need to know their requirements”. Dr Kan is an eminently practical man.

實用至上

— 紡織及製衣學系副教授
***簡志偉博士**專訪*

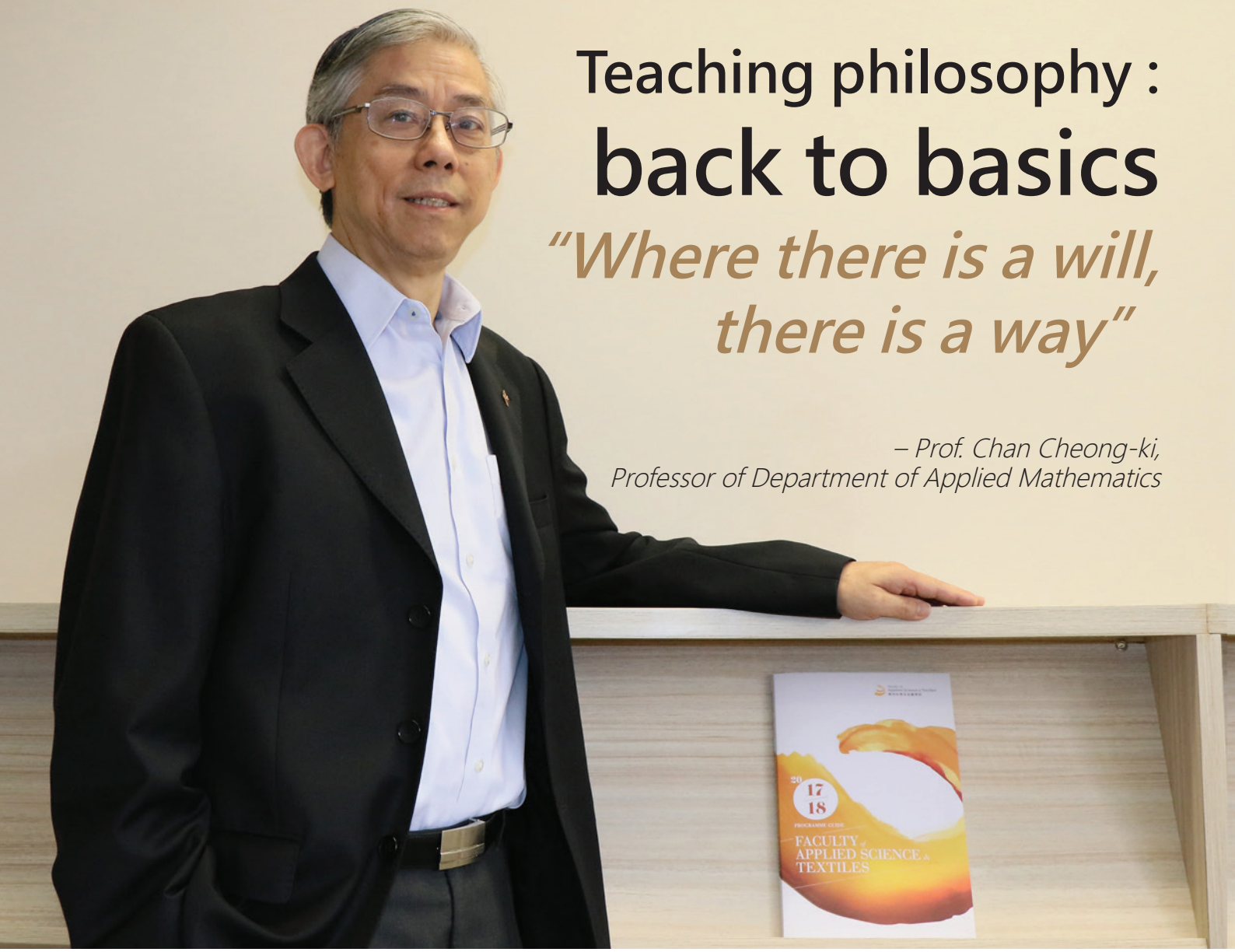
「實用至上」說易行難，但對紡織及製衣學系副教授簡志偉博士而言則是重要的。七年的職業安全與健康工作生涯，讓他將實用主義帶到教學與研究之中。

簡博士在理大取得學士和博士學位，早已對這裡的環境非常熟悉，這有助他培育新一代的時裝紡織人才。於教授紡織化學和染色時，他能引用過往經驗，解釋技術和工藝的商業效益及風險。簡博士表示：「上課的時候，我會跟同學講解與他們工作有關的安全及健康問題。」

簡博士強調，即使是在時裝設計中，同學也需要用到大量的技術。他在授課中加入了各種技術和設計方法的內容，不僅是為了傳授知識，也是為了讓他的學生日後能夠將所學惠及客戶。

他致力鼓勵學生把握創業的機會，並建議他們畢業後投身時裝紡織行業積累經驗。他表示，這樣有助他們將來建立自己的事業。

這樣的遠見在簡博士的研究中也可見一斑。他在抗菌織物和拒水性方面取得的出色成果得益於他對市場需求作出判斷並作出相應改變的能力。當提及需要減少碳用量才能製作出他所開發的超拒水材料時，他表示：「如果要將我們的研究應用到工業上、公眾身上，則需要先了解他們的需要。」簡博士無疑是一個實用至上的典範。



Teaching philosophy : back to basics

"Where there is a will, there is a way"

– Prof. Chan Cheong-ki,
Professor of Department of Applied Mathematics

I have been asked to write something to share with younger colleagues or prospective students, but this has proved a formidable task. Although many frontline teachers are now asked to discuss teaching philosophy in their teaching portfolios, I have always resisted because I do not believe that philosophy can be put on paper – except perhaps by philosophers.

In terms of my personal values and attitudes, I am committed to accepting all challenges and performing my duties wholeheartedly and unreservedly. I have always accepted teaching tasks assigned to me without reservation, whether this has involved teaching new courses or courses with unfamiliar subject matter. I truly believe the old proverb, "Where there is a will, there is a way". I certainly do not consider myself to be an excellent teacher, but I can say with my head high that I always try my best, with my students' well-being at heart.

Teaching is about communicating with people; in my case, with young people, who may have different abilities and expectations. Therefore, understanding their desires and concerns is crucial. I always try my best to consider their aspirations, which often differ considerably within a large class of undergraduate students.

The most important attribute of a good teacher is a passion for sharing knowledge with young people. That passion must be genuine and heartfelt. We teach students at all levels of ability, and we must be dedicated to conveying our knowledge regardless of their capabilities. We feel happy when our gifted students perform well, but we should be even more gratified when our less capable students manage to overcome barriers and attain new heights.

Another important aspect of the teaching experience involves setting an example for colleagues and students. Treating all colleagues and students as equal is necessary, although far from unchallenging. The basic principles are as follows: treating others in the way we expect to be treated, trying our best; performing whole-heartedly, getting back to the basics and listening to students' comments and responding to their needs.

教育哲學：莫忘初心

「有志者，事竟成」

— 應用數學系陳昌麒教授

應學院邀請，我準備與同事、後進或未來同學分享教學心得，下筆時方覺茫然，不知從何開始。雖然學院要求前線老師在教學履歷中探討教學哲學，但我一直不太情願，原因是哲學實難以用文字表達，除非是哲學家。

就個人價值及觀點而言，我熱愛挑戰，並會全心全意、毫無保留地履行職責。對於教學任務，不論是教授新課程或陌生課題，我一向會毫無保留地接受。我深信一句古語：「有志者，事竟成」。我自知並非一位完美的老師，但我可以自豪地說我已為學生的心智發展竭盡心力。

教學是一門講求與人溝通的藝術。年輕人稟賦期望各異，因此必須掌握學生的求學意欲及關注所在。數學系大多採用大班教學，學生志向雖然五花八門，但我都會力求考慮周全。

老師最重要的特點是熱愛與後輩分享知識。這份熱忱必須真誠並發自內心。學生雖然能力水平各不相同，為人師者務必有教無類，悉心傳授知識。資質優秀者表現出眾固然值得高興，但能力略遜者能夠克服困難、取得進步更值得欣慰。

對同事及學生以身作則是另一項重要的教學原則。對同事一視同仁，對學生有教無類，雖然不易做到，但確有必要。我的基本理念是：將心比心、竭盡全力、全心全意、莫忘初心、聆聽學生意見，響應學生需求。

過去三十五年，我有幸在教學過程中體會到許多快樂及難忘時光。二十年前的一幕，至今仍然心有餘溫。一天下午，我回到辦公室，發現之前教過的一個學生不期而來，攜妻兒在門外等候。學生本想路過問候，同事告知我很快回來，誰料學生在辦公室門外等了將近一個小時。學生當著妻子的面感謝我的悉心關懷並盛讚我是他遇到最好的老師之一。我心知這是溢美之詞，因為我周圍的良師大有人在。但是，我對學生的讚許感到由衷高興，自此之後教學便更有動力。還有一次經歷十分難忘。我收到一班學生寄來感謝卡，卡上寫著十五條留言，幾乎都是感謝我在大學期間給予關愛並在需要幫助及支持時伸出援手。

最後，我想以「敬業、盡責、奉獻、熱愛」作為結語。這些個人價值無法傳授，只能藉由他人分享與感受。

Over the last 35 years, I have been fortunate enough to experience many happy and rewarding moments during my interaction with students. One such incident, around 20 years ago, melted my heart. I returned to my office one afternoon to find a former student waiting outside with his wife and child, with no prior arrangement. My colleague had told them that I would be back soon, so they had waited outside my office for almost an hour, just to say hello. My student had told his wife that I was one of his best teachers at the University due to my apparent care for my students. He was obviously exaggerating as I am sure that many of my colleagues are better teachers. Nevertheless, I was overjoyed by his generous compliment, which has motivated me ever since. On another memorable occasion, I received a thank you card from a group of students. The card contained 15 individual messages, nearly all thanking me for the care I had given them over the previous few years and for "being there" when help and support were needed.

Finally, several key words come to mind: punctuality, conscientiousness, dedication and passion. These personal values cannot be taught, only shared and felt by others.

Smart Textiles and Clothing

– Prof. Tao Xiao-ming,
Chair Professor of Textile Technology

"I am so happy to see students and professors at the ITC working together to develop smart textiles and clothing that will help to reshape the future of society."

Clothing is the first item in the list of basic requirements of life in China, followed by food, housing and transportation. Textiles, made up of fibers, are the major materials used to make clothing. Currently, an average of 13 kg of fibers are consumed per person each year worldwide, and this number has increased steadily over the last 50 years. As a result, associated industries have formed a global network of value chains, creating an enormous demand for highly competent professionals and new technologies and innovations.

At the Institute of Textiles and Clothing (ITC), students and professors work together to develop new generations of textiles and clothing that will help to reshape the future of society. One such category comprises smart textiles and clothing.

What are smart textiles and clothing? They have high levels of intelligence, with many functions in everyday life. Smart textiles and clothing products can effectively see, feel, listen, talk, learn new things, memorize information, repair themselves, change their colour, shape or pattern, communicate with others via electronic media, mobile telephones and the Internet, and even provide their own power.

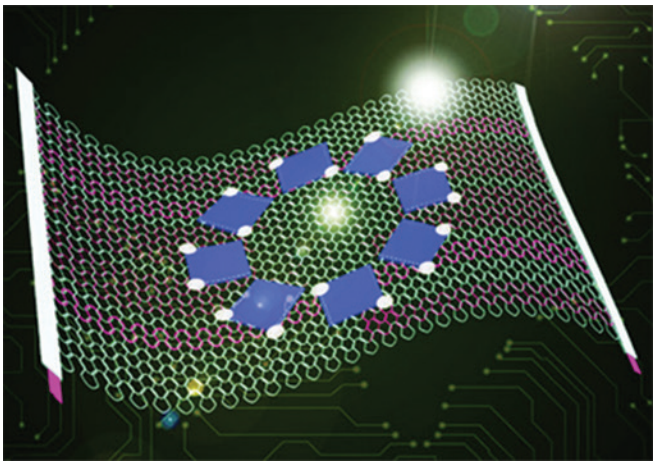
Nowadays, most smart devices and systems with the above attributes are rigid, taking a block form. Smart fibers and textiles have only been developed in the last 20 years. Obviously, related research is extremely inspiring but very challenging, covering scientific principles, new materials, fabrication technologies, functional and aesthetic design, evaluation instruments, testing methods and standards, and marketing strategies and business models for smart textiles and clothing products.

Over the last two decades, leading-edge research on smart textiles and clothing at the ITC has resulted in several notable discoveries published in top academic journals. ITC has the largest number of publications and citations on this topic worldwide. New technologies have been developed in many fields, such as healthcare, the Internet of things, smart cities, robotics, sports and the fashion industry. Examples include new fabric-sensing technologies used in smart footwear and clothing to train athletes, prevent sports injuries and help people suffering from hypertension, Parkinson's disease, cardiovascular disease and diabetics. In addition, light-

emitting fabrics with tunable colours and patterns have been used to create various modes and environments in rooms and halls. Smart clothing can change shape and size, provide air ventilation and even actively cool its wearer in response to environmental changes.

Students at the ITC learn the scientific principles underpinning these intelligent functions and apply these principles to the design, creation and testing of prototypes. They benefit from ample hands-on experience in and out of classrooms, laboratories and studios. In this multi-disciplinary area, ITC undergraduate students work side by side with undergraduates and postgraduates from other disciplines on many stimulating research projects. Our student teams have participated in many international competitions and received numerous prizes. Our postgraduate students have opportunities to join research teams and help administer research projects, enabling them to broaden their horizons and gain management experience.

This research area attracts many talented students and challenges them to achieve their full creative potential. The learning experience at the ITC prepares our graduates for exciting careers in innovation and technology. To date, three start-up technology companies have been set up by ITC graduates, and all have received funding from angel investors. Two have secured a large amount of venture-capital funding to mass-produce and market wearable technology products based on smart textiles and clothing. Many other graduates work in the fashion industry, where innovative and high value added products are in great demand.



Prof. Tao Xiao-ming and Dr Li Qiao at PolyU's Institute of Textiles and Clothing have developed fabric circuit boards (FCBs) wearable like ordinary fabric.

理大紡織及製衣學系陶肖明教授和李喬博士採用嶄新電腦紡織技術研製出新型織物電路板。

智能紡織品及服裝

— 陶肖明教授，紡織科技講座教授

「我非常高興看到紡織及製衣學系一眾學員及教授通力合作，開發出改變未來社會的智能紡織品及服裝。」

所謂「衣、食、住、行」，衣者為先。紡織品由纖維織成，是製造服裝的主要原料。目前，世界上每人年均消耗十三公斤服裝，這一數字在過去五十年來穩步上升。關聯產業構成了遍佈全球的價值產業鏈，並產生了巨大的專業人才、高薪科技及創新需求。

紡織及製衣學系一眾學子與教授通力合作，開發出改變未來社會的新一代紡織品及服裝。智能紡織品及服裝便是其中一例。

何謂智能紡織品及服裝？智能紡織品及服裝擁有高度智能，並具有多項日常功能。智能紡織品及服裝能夠有效觀看、感受、聆聽、對話、學習新事物、記憶資訊、自我修復、調節顏色、形狀或圖案，並透過電子媒體、流動電話及互聯網與人溝通，甚至自我發電。

目前，具有上述功能的智能裝置及系統大多設計僵化、形態笨拙。智能纖維及紡織品的開發歷史僅有短短二十年。顯然，與智能紡織品及服裝產品有關的研究涵蓋科學理、新材料、紡織科技、功能及審美設計、評估器材、測試方法及標準、市場營銷策略及商業模式等領域，雖極具創意，但困難很多，難以實現。

過去二十年，紡織及製衣學系致力於智能紡織品及服裝領域的前沿研究，並成功在眾多頂尖學術期刊發表多項重大發現。紡織及製衣學系在該領域的論文發表量及引用量全球第一。醫療保健、物聯網、智能城市、機器人、體育及時尚行業等領域已開發眾多全新科技，包括可用於訓練運動員、預防受傷、緩解高血壓、帕金遜症、心血管疾病及糖尿病的纖維傳感科技鞋履及服裝。此外，還有可調節色調及圖案，用於營造各種室內及大堂模式及環境的發光纖維。智能服裝可以改變形狀及大小、通風散熱，甚至能主動根據環境變化降低穿戴者體溫。

在紡織及製衣學系，學生可以學習實現這些智能功能的科學原理並將其應用原型設計、製造及試驗，並透過大量實踐經驗及課外活動、實驗以及習作獲得寶貴知識。此外，紡織機服裝學系致力於跨學科研究，鼓勵本科生及研究生在眾多有挑戰性的研究課題學科上緊密協作。學生積極組隊參加國際競賽並獲得多項大獎。研究生還有機會加入研究團隊並協助項目管理，從而擴闊視野，獲得管理經驗。

該研究領域吸引了眾多才能優異的學生參與，不斷激發學生潛能。在紡織及製衣學系的求學經驗為日後精彩的創新及科技生涯奠定基礎。目前，紡織及製衣學系畢業學子已成立了三間科技公司，並獲得天使投資者資助。其中兩個項目已獲得一筆可觀的風險投資基金支持，用於大量製造及推廣智能紡織品及服裝的可穿戴產品。此外，還有眾多畢業學子投身於需要不斷創新及高附加值產品的時尚行業。

Reflection by
Mr Stephen Au Ling-ming

I am honoured and excited to receive the Outstanding PolyU Alumni Award 2017. I would first like to thank Professor Daniel Lau, Head of the Department of Applied Physics, for nominating me for the award. The origins of my success lie in my study for the Higher Diploma in Applied Science at Hong Kong Polytechnic (the former name of The Hong Kong Polytechnic University). This course provided a wide range of basic physics and engineering knowledge, which has aided my career and professional development over the past 35 years.

I still remember my final-year project on the strength and durability of a composite bamboo/resin material as a substitute for wood, a topic on which few studies had been conducted at that time. My project supervisor, Professor Frankie Shin Dingguo, gave me plenty of freedom and support. He even helped me to send the material to a professional British laboratory to view the molecular structure of the bamboo fibre under an electronic microscope. My final-year project undoubtedly cultivated my willingness and ability to innovate, overcome boundaries and embrace new things.

I firmly believe that technology can make our lives better. In 1995, I founded the information-technology company "MTECH Engineering Co., Ltd.", which provides Building Information Modelling (BIM) and Product Lifecycle Management (PLM) solutions and consulting services for the construction and manufacturing industries in Hong Kong and China. The company helped the local manufacturing industry to migrate from 2D design and manufacturing to 3D design and numerical-control machining. We also cooperated with PolyU's Department of Mechanical Engineering to set up the Product Design and Analysis Centre and help the electrical home appliance and watch industry to develop a modular and knowledge-based methodology for engineering and product design. The company later extended its activities to the construction industry, working with PolyU's Department of Building and Real Estate to set up the Virtual Construction Laboratory. In cooperation with Swire Properties and Gammon Construction, MTECH completed Hong Kong's first BIM project, a high-rise, grade-A commercial building named One Inland East. In 2003, MTECH and Dassault Systems donated a number of high-end PLM system software packages to PolyU.

區令明先生獲獎感言

能夠獲得第十一屆傑出理大校友獎，我深感榮幸及振奮。首先，我要感謝應用物理學系主任劉樹平教授提名我為該獎項的候選人。我之所以能獲得今天的成就，完全離不開我在香港理工學院（香港理工大學的前稱）攻讀應用科學高級文憑期間的寶貴經歷。學校課程包括一系列基礎物理及工程知識，為我以後三十五年的職業及專業發展奠定基礎。

我依然記得當年的畢業研究項目，是研究複合竹板/樹脂材料作為木材替代材料的強度和耐久度，這是當年較為冷門的課題。我的項目導師冼定國教授給了我足夠的自由探索空間和支持。他甚至還幫我將材料送到英國一個專業的實驗室，用電子顯微鏡觀察竹纖維的分子結構。我的畢業研究項目無疑培養了我創新的主動性和能力，鼓舞我迎難而上及與時俱進。

我始終相信，科技改善生活。1995年，我創立了資訊技術公司 MTECH Engineering，為香港及中國內地的建築及製造行業提供建築資訊模型 (BIM) 及產品生命週期管理(PLM)解決方案及諮詢服務。本公司幫助當地製造行業成功從 2D 設計製造過渡到 3D 設計及數碼控制加工。我們還與理工大學機械工程學系合作建立產品設計與分析中心，幫助家用電器及手錶行業開發模組及知識基礎型的方法，用於工程及產品設計。之後，本公司將業務活動擴展到建築行業，與理工大學建築及房地產學系合作開辦虛擬建築實驗室。MTECH 還與太古地產及金門建築合作，圓滿完成了香港首個 BIM 項目，該項目為甲級高層商業建築，名為港東島中心 (One Inland East)。2003年，MTECH 與達索系統 (Dassault Systems) 合作為理工大學捐贈了數個高端 PLM 系統軟件套件。

我公司在過去二十年發展迅速，期間參與了多項大型項目開發，當中包括 2008 年北京奧林匹克運動會建築國家體育館鳥巢、杭州南豐國際會展中心、沈陽新世界國際會展中心，以及參與新鴻基地產運作的多個大型房地產項目。去年，MTECH 憑藉向建築及製造行業提供 3D 技術，獲權威性雜誌《Mediazone》評為「香港最有價值公司」。

在我看來，這個獎項印證了學術、行業及技術的密切關係。我將會一如既往支持理工大學的發展，將研究與技術應用結合，培養人才，促進資訊技術、建築及製造行業的不斷創新和發展，助香港轉變為知識型社會。

The company has developed rapidly over the past two decades, during which it has contributed to a number of large projects, such as the construction of the 2008 Beijing Olympic Games Bird's Nest National Stadium, the Guangzhou Nanfeng International Convention and Exhibition Centre and the Shenyang New World International Convention and Exhibition Centre, along with several large-scale real estate projects run by Sun Hung Kai Properties. Last year, MTECH won the award for Hong Kong's Most Valuable Company from the prestigious magazine Mediazone in recognition of its provision of 3D technology for the construction and manufacturing industries.

From my perspective, if this award stands for anything, it stands for the union of or alliance among academia, industry and technology. I will continue to support PolyU's development by linking research with technology and application, fostering talent and promoting continuous innovation and development in the information-technology, construction and manufacturing industries to help Hong Kong become a knowledge-based society.

Mr Stephen Au Ling-ming
Managing Director, MTECH Engineering Co., Ltd.
Higher Diploma in Applied Science (1982),
Hong Kong Polytechnic

區令明先生
MTECH 工程有限公司董事總經理
應用科學高級文憑課程（1982），香港理工學院

DEPARTMENT OF
APPLIED BIOLOGY AND
CHEMICAL TECHNOLOGY
應用生物及化學科技學系

ABCT students studying the Service-learning in Nutrition and Healthy Diet serve the underprivileged families in Hong Kong through community activities, family visits, diet interview and counselling etc.

Healthy food making demonstration during service in Tai O primary school

Service Learning

In 2012, PolyU introduced service-learning subjects that integrate community service with academic study and reflections to enrich students' learning experience. The aims are to enhance students' sense of civic responsibility and engagement, and to benefit the community at large. FAST currently offers five service-learning subjects to students from various disciplines, including *Educating Rural Farmers on Healthier Food Production*, *Engaging Fashion as a Communication Media for the Needy*, *Nutrition and Healthy Diet*, *Enhancing Scientific Literacy through Daily Physics* and *Quantitative Methods for Community Service*.

AMA students helped delivering and serving hot meals at Food Angel Community Centre to the elderly.

DEPARTMENT OF APPLIED MATHEMATICS
應 用 數 學 系

AMA students interviewed the elderlies for the hot meal service offered by the Food Angel.

Department of Applied Physics
應用物理學系

PolyU Science Fun Day

HKSciFest – Science Workshop

STEM Workshop

服務學習

為了增強學生公民責任感、提高學生參與度及惠澤社會大眾，理大於2012年開辦了融合社區服務和學術研究及思考的服務學習科目，以豐富學生的學習體驗。目前，應用科學及紡織學院向各學科學生提供五個服務學習科目，包括*Educating Rural Farmers on Healthier Food Production*、*Engaging Fashion as a Communication Media for the Needy*、*Nutrition and Healthy Diet*、*Enhancing Scientific Literacy through Daily Physics* 和 *Quantitative Methods for Community Service*。

INSTITUTE OF TEXTILES & CLOTHING
紡 織 及 製 衣 學 系

Four students join summer programme with Brunello Cucinelli to Italy. Judges Prof. Calvin Wong(left) and Ms Kim Wong(right) with selected students (second from left) Man Tsang, Hayley Wong, Tracy Yeung and Tiffany Cheuk.

Youreable Fashion Design 2017. Best Design – Promise 承諾 by Chan Chi-yan (in red dress)

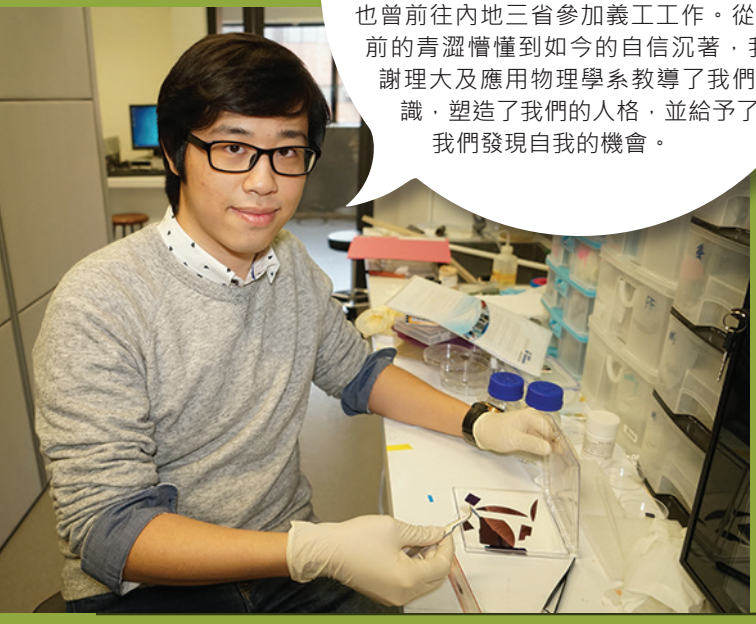
Cheng Wai Yin
鄭慧賢

– BSc(Hons) in Food Safety and Technology

理大校訓為「開物成務 勵學利民」。理大為我們提供了互動的教學環境，鼓勵我們擺脫固有框架，將知識付諸實踐。去年夏天，我很高興有幸到劍橋大學作學習交流。通過課堂活動及與各地頂尖學生交流， 不僅豐富了我的學術知識，還拓闊了國際視野。除了吸收課堂知識外，理大還鼓勵我們發揮創意潛能。在學期間，我參與了很多充滿挑戰性的比賽及嘗試開發不同新食品及口味。感激理大為我們帶來豐富多彩的大學生活。

'To learn and to apply, for the benefit of mankind' is PolyU's motto. PolyU provides us with an interactive learning environment, encouraging us to escape from the ordinary and putting our knowledge into practice. Last summer, it was my great pleasure to join the University of Cambridge as an exchange student. Attending lectures and meeting various outstanding students from around the world not only deepened my scientific knowledge but also equipped me with advanced communication skills and develop a global mindset. PolyU encourages us not only to learn but also to unleash our potential for innovation. Entering food-innovation competitions has undoubtedly strengthened my teamwork and leadership skills. The University also organizes a variety of volunteer activities for the benefit of mankind such as spending a summer in Turkey teaching English was an unforgettable experience. All of these opportunities have made my university life more fruitful and rewarding.

時光荏苒，在理大的四年已經在不知不覺中過去。在這四年，我不僅獲得了跟隨教授參與科學研究的機會，還獲學校推薦到美國最頂尖大學交換學習。同時，理大給了我們豐富的課外活動機會。我曾經在英語話劇社擔任了兩年後台指揮，也曾前往內地三省參加義工工作。從四年前的青澀懵懂到如今的自信沉著，我感謝理大及應用物理學系教導了我們知識，塑造了我們的人格，並給予了我們發現自我的機會。



Zhong Ren
仲任

– BSc(Hons) in Engineering Physics

Time flies! My university life at PolyU has gone by in a rush. During the last four years, I have not only participated in scientific research at PolyU but have also been given the opportunity to attend a top US university as an exchange student. PolyU has offered us plenty of opportunities to take part in extracurricular activities. I worked as backstage leader in the English Drama Club for two years, and travelled to three provinces in the Mainland China to do volunteer work. The shy little boy who started at PolyU four years ago has become a confident and brave man. I would like to express my sincere gratitude to PolyU and the Department of Applied Physics for giving me these opportunities to realize my potential.

Zulifqar Adeel

– PhD student

I feel delighted and blessed to share my experience of studying at PolyU. Going to university is generally a very important and interesting phase of a person's life. However, my experiences at PolyU have changed my lifestyle and personality. Most people go to university to learn, but I believe that to be a successful undergraduate student, you must learn how to learn. I have experienced this kind of learning at PolyU. I do not believe that I would have found such a supportive workplace or cooperative peers at another institution. The support and generosity of my peers and university staff, and the compassionate guidance I have received are priceless. I believe that my training at PolyU will provide a foundation for my future achievements, both professional and academic. The confidence and professional attitude instilled in me by PolyU are assets that will stay with me forever.

Thank you, PolyU; thank you, my alma mater.

Li Ruitong
黎芮彤

– BSc (Hons) in Applied Biology and Biotechnology

As an undergraduate student majoring in Applied Biology with Biotechnology, I have gained a solid foundation for my future career from PolyU's comprehensive curriculum and diverse experimental sessions. In addition, undertaking numerous internships and overseas exchange opportunities has been invaluable in enabling me to apply my knowledge to practice. PolyU alumni were a valuable source of first-hand information, making my application process for a Master's degree much smoother and more organized. Most importantly, PolyU has professors with diverse education backgrounds and research interests, and a multicultural student population, which gave me the chance to deepen my own understanding of the world. Based on my 4-year experience at PolyU, I wholeheartedly recommend this programme to all senior high school students who are enthusiastic about biology, as I believe that both this programme and PolyU will help them to realize their full potential.

大學四年，作為理工大學應用生物專業的一名本科生，在專業方面，多元化的課程安排和豐富的實驗操作機會為我之後的職業規劃打下了堅實的基礎；學系提供的各種實習及海外交流機會更是讓我受益良多；已畢業的學長學姐也在我申請研究生課程時成為了最珍貴的資訊來源；來自不同學術及科研背景的教授和多元文化的同學也成為了建立完善世界觀的重要渠道。基於我的經歷及見聞，我極力向對生物行業充滿熱誠的學弟學妹推薦理大的應用生物課程。

Li Chung Pang
李仲鵬

– BSc (Hons) in Chemical Technology

Studying at PolyU has been the best chapter of my life, enabling me to consolidate my academic experience and broadening my global vision.

光陰似箭，日月如梭。精彩的大學生涯，為我的生命添上濃厚的色彩。

化學科技課程教授一系列有關化學的專業知識，讓我能夠為未來的工作做好準備。例如學系提供的品質保證原理，讓我明白到行業對品質保證的要求和品質保證對人類的重要性。

學系還提供了豐富的海外交流學習機會。在2015年，我有幸得到學系的推薦，前往新加坡國立大學交流。在海外交流期間，我不但能夠體驗當地的文化，而且還深受當地學生積極的學習氣氛所薰陶。

大學的知識和體驗為我帶來挑戰未來的勇氣。非常感謝應用生物及化學學系給予我豐富多彩的大學生涯。

The Chemical Technology programme has helped me to become a well-rounded chemist with advanced chemistry knowledge and expertise in analytical techniques. Besides teaching, the academic staff are willing to provide support and help us to solve our study problems.

I was thrilled to participate in an overseas exchange programme to Singapore to enrich my global vision. I spent a semester studying at the National University of Singapore, the highest-ranked university in my major. I immersed myself in the University's enjoyable learning atmosphere and developed a more positive learning attitude which has motivated me to overcome various challenges since returning to Hong Kong.

My university life would not have been so fruitful without the opportunities offered by PolyU. I would like to thank the Department for the valuable experiences it has given me.

Huang Jiayang
黃佳揚

– BSc (Hons) in Investment Science

The Department of Applied Mathematics is like a warm family, whose members provide great support for students' academic learning and invaluable opportunities for career development. My 3 years of study have equipped me with a solid foundation in both statistics and finance, and numerous opportunities to apply our knowledge. I have greatly appreciated these opportunities, and particularly enjoyed undertaking projects on derivatives pricing and the construction of hedge funds. These projects not only proved enjoyable, but also give me an edge in the workplace. Indeed, the Department does much to facilitate students' career development. For example, regular career talks and practical workshops are held. I benefited immensely from attending a workshop providing advanced training in Excel and various career talks.

我是來自投資科學專業的大三學生。對我來說，AMA就像是一個大家庭，所有的教職人員無論是在學業上還是在職業規劃上，都給了我很大的幫助。三年來，我不僅在統計和金融知識方面打下了堅實的基礎，還通過多種課題積累了一些實務經驗。例如期權定價和建立對沖基金的課題不僅有趣，還有助於未來求職。此外，學系還經常組織各種培訓和分享會來幫助學生就業。我從學系組織的進階Excel培訓和各種職業分享會中受益匪淺。

Overseas internship opportunities 2017

Internship Opportunities

實習機會

FAST is committed to providing vast internship opportunities for students as we place great importance on practical training and connecting classroom theory with workplace application.

To encourage students' engagement, our Faculty introduces Sponsorship for Internship Enhancement Programme and offers students with a maximum of HK$5,000 and HK$10,000 subsidies for their participations in local and offshore internship programmes respectively.

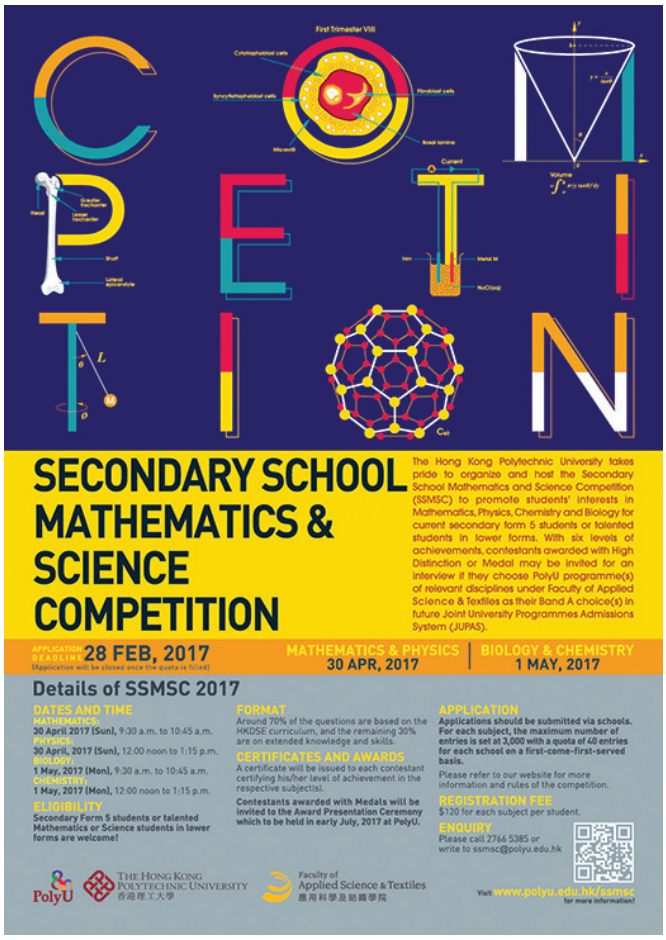
The Faculty organizes regular pre-internship workshops to facilitate students the transition from study environment to workplace. Topics such as communication and presentation skills, personality assessment and time management will be delivered by professional trainers.

應用科學及紡織學院非常重視實踐培訓，一向致力為學生提供大量實習機會，讓學生將課堂理論與工作場所應用相結合。

為了鼓勵學生參與，學院透過實習增進贊助計劃，分別為參與本地和離岸實習計劃的學生提供最多5,000港元和10,000港元的津貼。

此外，學院亦定期舉辦實習工作坊，教授時間管理、團體精神、及溝通與表達技巧等，以裝備同學迎接實習工作。

Secondary School Mathematics and Science Competition (SSMSC) Presentation Ceremony
高中數理比賽 (SSMSC) 頒獎典禮



To foster interest among secondary school students in the applied sciences, FAST has organized the annual Secondary School Mathematics and Science Competition since 2014. This year we were thrilled to receive enthusiastic responses from over 300 schools with nearly 11,000 entries related to biology, chemistry, physics and mathematics. The competition, one of the most significant mathematics and science competitions for secondary schools, ran on 30 April and 1 May. The most outstanding contestants will receive awards on the PolyU campus on 30 June.

為培養高中生對應用科學的興趣，應用科學及紡織學院自2014年起每年舉辦高中數理比賽。今年，共有超過三百所學校參與，近一萬一千位學生參加生物、化學、物理和數學比賽，反應熱烈。作為本港最重要的高中數理比賽之一，這次比賽已在四月三十日及五月一日舉行。表現最優異的參賽者於六月三十日赴理大校園領獎。

30 June 2017

Taiwan Education Expo
台灣教育展

Information seminars and individual consultations on applying to programmes and planning careers will be offered to interested secondary school students in Taiwan this summer.

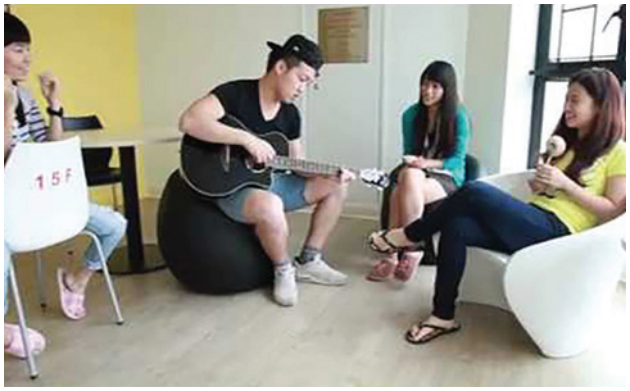
今年夏季我們將向有興趣的台灣高中生提供有關於學院課程申請及職業規劃的資訊研討會和個別諮詢。

22-23 July 2017

PolyU Science Star Summer Camp
香港理工大學科學新星培育計劃夏令營

This year, the footprint of the Secondary School Mathematics and Science Competition extended to mainland China. Over 1,000 students from 7 cities including Beijing, Changchun, Chengdu, Hangzhou, Shenzhen, Wuhan and Xian participated in the event. Among them, 20 students with outstanding performance were invited to PolyU for the Science Star Summer Camp from 6 to 18 August. Cross-disciplinary lectures, workshops, tour visits and study projects will be arranged.

今年，高中數理比賽的足跡已遍佈中國內地，包括北京、長春、成都、杭州、深圳、武漢和西安在內的七個城市的千餘名學生紛紛踴躍參與。其中二十名脫穎而出，並受邀赴理大出席八月六日至十八日舉行的科學新星培育計劃夏令營，參加跨學科講座、研討會、遊覽參觀及研究項目。



6-18 August 2017

FAST Orientation Day
應用科學及紡織學院迎新日

To smooth their transition into life at PolyU, new students will be warmly greeted by faculty members from our 4 departments at the FAST Orientation Day before the new academic semester commences.

為了幫助新生順利融入理大的生活，應用科學及紡織學院四個學系的教職人員會在新學期開始前的迎新日歡迎新生的到來。

28 August 2017

PolyU Info Day
理大資訊日

The annual PolyU Info Day is a major event that offers a wide variety of activities to secondary school students and visitors who are interested in learning more about PolyU.

每年舉辦的理大資訊日是校園一大盛事，期間會向高中生和有意進一步了解理大的訪客推出各種活動。

30 September 2017

Faculty of
Applied Science & Textiles
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