



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

# NEWSLETTER

ISSUE #4 December 2018



THE HONG KONG  
POLYTECHNIC UNIVERSITY  
香港理工大學

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

# Contents

P.3	<b>Dean's Message</b> 院長的話
P.4-7	<b>Interview with FAST Researchers</b> 學院研究員專訪
P.8	<b>ITC AIFT Conference / Grand Opening of ITC Store</b> 人工智能與時尚紡織大會 / ITC Store開幕
P.9-10	<b>Handmade Greeting Card</b> 自製賀卡
P.11	<b>FST 10<sup>th</sup> Anniversary Event Highlights</b> FST成立十週年紀念焦點
P.12-13	<b>Teachers' Sharing</b> 杏壇拾遺
P.14-15	<b>Innovation and Science</b> 創新與科技
P.16	<b>University Research Facility in Big Data Analytics</b> 大數據分析中心實驗室
P.17	<b>Upcoming Events / Award News</b> 活動預告 / 得獎消息
P.18-19	<b>Students' Sharing</b> 學生分享
P.20	<b>FAST Recap</b> 學院點滴

## Editorial Board

Chairman :	Prof. Man-sau Wong, <i>Professor (ABCT) and Associate Dean (External Relations and Development)</i>
Members :	Prof. Raymond Wong, <i>Chair Professor (ABCT) and Associate Dean (Research)</i>
	Prof. Kin-wing Kwok, <i>Professor (AP) and Associate Dean (Academic Support)</i>
	Dr Lilly Li, <i>Associate Professor (ITC)</i>
	Dr Rachel Yee, <i>Associate Professor (ITC)</i>
	Dr Fung Kin Hung, <i>Assistant Professor (AP)</i>
	Dr Susan Ho, <i>Senior Teaching Fellow (ABCT)</i>
	Dr Fridolin Ting, <i>Teaching Fellow (AMA)</i>





## Faculty of Applied Science & Textiles

應用科學及紡織學院

Welcome to the fourth issue of the newsletter!

Our faculty takes pride in providing programmes relevant to the rapid changes in society. The globalisation of the food trade requires food professionals to understand food standards, methods of analysis and risk assessment. As such, we will launch the full-time taught postgraduate programme, "MSc in Global Food Safety Management and Risk Analysis" in 2019/20. In addition, we will introduce the "BSc(Hons) in Investment Science and Finance Analytics" to meet the strong manpower demand for professionals with data analytics and technological skills for business, banking and finance, insurance, market research and related industries.

I am delighted to announce that our researchers and students have received awards both locally and worldwide. Prof. Defeng Sun from Department of Applied Mathematics (AMA), and his team is the first Asian team that won the 2018 Beale-Orchard-Hays Prize for Excellence in Computational Mathematical Programming for their outstanding work on SDPNAL+. Dr Zhou Zhi from AMA received the Early Career Award from the Research Grants Council for his project, 'Numerical Methods for Time-fractional Diffusion Equations with Non-smooth Solutions'.

歡迎閱讀應用科學及紡織學院第四期學院通訊！

本院一直致力開設針對社會快速變革的課程，並為此深感自豪。全球化食品貿易市場要求食品科技的專家了解食品安全標準、檢測方法及評估風險。有見及此，我們將於2019/20學年開設「環球食品安全管理及風險分析理學碩士學位」全日制課程。為迎合商界、銀行與金融、保險、市場研究及相關行業對資料分析及技術專才的强大需求，我們亦會開設「投資科學及金融分析(榮譽)理學士」課程以培育人才。

本年度學院研究人員及學生勇奪了多項本地及國際大獎，我深感喜悅及振奮。應用數學系孫德鋒講座教授與團隊的研究項目SDPNAL+，榮獲國際數學優化學會(MOS)頒發2018年度Beale-Orchard-Hays獎，是首個獲得此項殊榮的亞洲研究團隊。周知博士憑「非光滑時間分數階擴散方程的數值算法」課題獲得了研資局頒發的「傑出青年學者獎」。此外，喬中華博士獲香港數學學會頒發2018年度年輕學者獎。紡織及服裝學

Dr Qiao Zhonghua from AMA received 2018 Hong Kong Mathematical Society Award for Young Scholar. ITC PhD student Chan Wing Yu won the Student Award at the first Athanasiou Annals of Biomedical Engineering endowment in Atlanta. These awards recognise the efforts, dedication and achievements of our research faculty members and students. We will continue to push the frontiers of research contributing to our society and mankind.

Finally, I would like to congratulate the over 1,100 graduates who were conferred academic awards during our 24<sup>th</sup> Congregation. They are now equipped with the professional knowledge, positive attitudes and problem-solving skills provided by our FAST family. May all of them find fulfilment and happiness in their new careers and lives.

My warmest wishes for your happiness during this festive season!

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

系博士生陳穎如同學亦榮獲第一屆亞特蘭大Athanasiou生物醫學工程期刊學生獎。這些獎項肯定了本院研究人員及學生的努力、貢獻及成就。我們將繼續推動有助於社會及人類發展的研究工作。

最後，我謹祝賀於第廿四屆應用科學及紡織學院畢業典禮中獲授予學術學位資格的1,100多名畢業生。在學院的培育下，畢業生們已具備良好的專業知識、積極的態度及解決問題的技能。我們衷心祝願應屆畢業生在生活及事業中取得成功且幸福美滿。

謹祝大家新年進步，生活愉快！

應用科學及紡織學院院長  
化學科技講座教授  
黃永德教授

# The Fundamentals of Light

– Interview with **Dr Law Ga-lai**,  
Associate Professor, Department of Applied Biology and Chemical Technology

The fundamental properties of light have long fascinated **Dr Law Ga-lai**. As a chemist, she creates molecules that can be used to design new light-emitting optical materials and, in the biomedical context, to design compounds or probes that are used to follow biological processes with minimal interference.

Through a multi-disciplinary collaboration, Dr Law's team has been involved in the development of innovative photodynamic agents that could eventually improve cancer diagnosis and

treatment. Current agents are not cancer-specific, meaning it cannot differentiate normal and cancer cells, she explained, whereas the new agents are capable of specifically targeting cancer cells, opening up a new direction in the development of "precision medicine".

Dr Law is also working on the development of new chiral compounds for bio-imaging applications. Concerns have recently been raised over the safety of MRI contrast agents, which are used to enhance the quality of imaging but are potentially toxic when free Gadolinium ions leach and accumulate in the brain. The newly developed agents are significantly more stable than those clinically used at the moment, which makes them less likely to release toxic metal ion. "We're seeing really interesting improvements compared with existing agents," commented Dr Law, "although it's still too early to tell whether these agents could be developed for medical use."

According to Dr Law, one of the most difficult aspects of her work is learning to overcome disappointment when initially promising ideas fail to produce desired results. The resilience to overcome such obstacles is driven by a fervent passion and ardent interest in her work. These are also traits that she looks for in prospective research students. Teaching and training postgraduate students is not just about imparting skills and producing publications, she added: helping students to navigate their personal journeys and develop their confidence to overcome challenges in their research as well as personal life is just as important.



## 光的基本性質

— **羅嘉麗博士**專訪  
應用生物及化學科技學系副教授

光的基本性質一直讓**羅嘉麗博士**著迷，作為化學家，她創造的分子可用於設計新型發光光學材料，並且在生物醫學領域中用於設計化合物或探針，以減低在追蹤生物過程中的干擾。

通過多元學科合作，羅博士的團隊參與了光動力製劑的創新開發，此製劑最終可以改進癌症的診斷和治療。她解釋說，目前的製劑不是癌症專用，無法區分正常細胞和癌細胞，而新製劑能夠專門針對癌細胞，為「精準醫療」的發展開闢了新的方向。

羅博士還致力於開發用於生物成像應用的新型手性化合物。最近磁力共振造影劑的安全性受到質疑，這些造影劑有助提高成像質素，但當游離的釷離子滲透並積聚在腦中時可能具有毒性。新開發的製劑比目前臨床使用的製劑穩定得多，這使它們不太可能釋放出有毒的金屬離子。羅博士表示：「與現有製劑相比，我們看到了非常有趣的改進，雖然現在判斷這些製劑是否會用作醫療用途還為時尚早。」

羅博士表示，在實驗自己的想法時最困難的地方是如何克服在未能產生預期結果帶來的失望。她解釋說，正是對工作的熱誠和興趣驅使她克服這些障礙。這些也是她在未來研究生身上尋找的特質。教授和培訓研究生不僅是傳授技能和發表論文，她深信幫助學生選擇人生取向、樹立信心，以及在研究和個人生活中克服挑戰同樣重要。

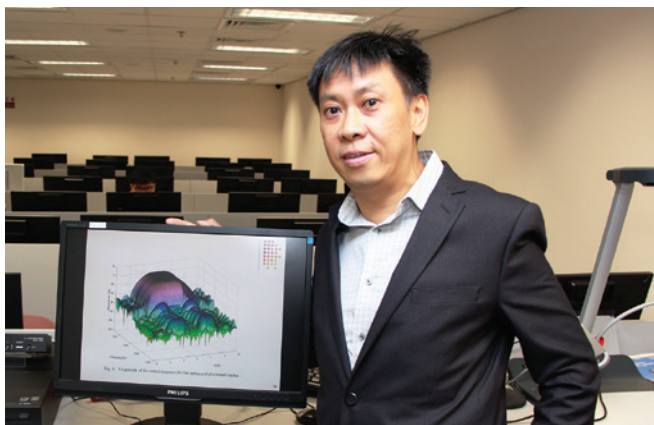


# Solving Complex Problems through Applied Mathematics

– Interview with Prof. Yiu Ka-fai, Cedric,  
Professor, Department of Applied Mathematics

The most interesting part of being an applied mathematician, according to Prof. Yiu Ka-fai, is the opportunity to work with scientists in many fields. But that is also a great challenge, because it involves understanding an array of scientific and engineering problems to work out how mathematical modeling and optimization can be used to solve them.

Prof. Yiu has always been motivated to use his mathematical and computing skills to solve real problems. As a PhD student at the University of Oxford in the 1990s, he received support from Rolls Royce to study the design optimization of turbo machinery. Since those early days, he has applied his skills to solve problems in a diverse range of scientific fields.



One of his main interests is the optimization of microphone arrays to enhance speech recognition quality. Implanting multiple microphones in intelligent devices means that the noise source can be accurately located using the difference in the time it takes the signals to arrive. Prof. Yiu uses his knowledge of physical modeling, physics, optimization and mathematics to tackle these problems, which may eventually be applied in speech recognition software, interactive appliances, hand-held devices and even toys. He is also hopeful that it will enable a meaningful machine-human conversation in the near future.

Huawei, one of the world's largest communications companies, provided support for Prof. Yiu to develop an optimization model to enhance the accuracy of communication devices. This work resulted in a low-density parity correction model that improves the correction of the random errors that arise when data are sent via optical fiber or wireless communication, thus enhancing the quality of received data.

Among many other applications, Prof. Yiu has also worked on the development of a technique for automating the detection of anterior chamber-angle glaucoma, a common cause of blindness in Asian populations. Widespread screening using the new technology could one day save the sight of many people who develop this devastating condition.

## 運用應用數學解難

— 姚嘉暉教授專訪  
應用數學系教授

作為應用數學家，姚嘉暉教授認為最有趣的是有機會與多個領域的科學家合作。但這也是一項巨大的挑戰，因為應用數學家需要理解一系列科學和工程問題，才能設定合適的數學模型和優化方案來解決這些問題。

姚教授一直積極運用他的數學和電腦知識來解決實際問題。上世紀90年代在牛津大學攻讀博士時，他得到了勞斯萊斯飛機發動機品牌的支持，研究優化渦輪機械的設計。從那時起，他便開始運用自己的專業知識解決各種科學領域的問題。

他的主要研究方向之一是優化麥克風陣列以提高語音識別質量。在智能通訊裝置中植入多個麥克風，利用訊號傳遞所需時間的差別，便可準確地找出背景噪音的聲源。姚教授利用他的物理建模、物理學、優化和數學知識來解決這些問題，最終希望可以應用於語音識別軟件、互動式裝置、手提裝置甚至玩具。他也希望在不久的將來，這研究能促成機器與人類之間有意義的對話。

獲得全球最大的通訊公司之一華為的支持，姚教授建立了能提高通訊裝置的準確性的優化模型。此項工作最終得出一套低密度同位元校正模型，改進了通過光纖和無線電訊中發送數據時出現的隨機誤差的校正，從而提高了接收數據的質量。

在眾多應用當中，姚教授還致力於建立一種自動檢測青光眼的技術。青光眼是亞洲區內常見的致盲眼疾，使用這種新技術進行廣泛篩查，將來可望拯救更多罹患這種破壞性疾病病人的視力。

# Developing the Materials of the Future

– Interview with **Dr Huang Haitao**,  
Associate Professor, Department of Applied Physics

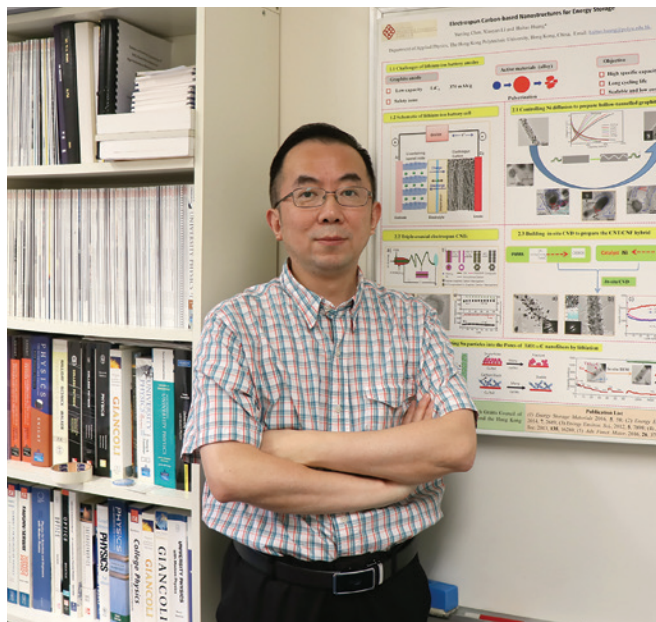
Backed by a Bachelor's degree in physics and a PhD in material science, **Dr Huang Haitao** is a researcher who aims to “underpin the physics behind materials”. Although his work focuses on fundamental studies, he emphasizes that the materials he and his team develop will eventually be turned into applications with the help of industry partners.

One example is the team's recent development of novel single crystals with very good piezoelectric properties for use in underground sensors. When normal materials are placed

underground, where the temperature is 250 °C, they undergo a phase transition and lose their properties. As the newly fabricated material has a higher phase transition temperature, it can withstand the temperature underground, making it highly suitable for applications such as oil detection. The team is currently working with industry partners to obtain funding to develop a practical application of the technology.

The team is also working on energy storage materials such as lithium ion batteries, supercapacitors and solar cells. Dr Huang described lithium rich layered oxides as the “future cathode materials” because they provide much higher energy density than currently available ones. Yet he cautioned that problems still need to be overcome, such as structural instability, oxygen gas evolution, voltage fade, and low lithium kinetics during charge and discharge. Still, promising results indicate that the materials may reach the market within five years.

One of the most important breakthroughs Dr Huang has made is the development of titanium dioxide nanotube photonic crystals. He described these as similar to a mirror, but the photonic bandgap can be controlled to selectively reflect the light within a restricted wavelength range. The nanotube photonic crystals can be used as a reflector in dye sensitized solar cells, which have a very narrow absorption bandwidth, to significantly improve power conversion efficiency and at the same time maintain the solar cells transparent. Although this technology has been overshadowed to a degree by the recent emergence of perovskite solar cells, Dr Huang is confident that a new application will soon be found.



## 開發未來材料

— **黃海濤博士**專訪  
應用物理學系副教授

**黃海濤博士**擁有物理學學士學位和材料科學博士學位，致力於「發掘材料背後的物理學」的研究。雖然他的工作重點是基礎研究，但他深信在業界合作夥伴的幫助下，他和他的團隊開發的材料最終能夠實際應用。

例如團隊最近開發用於地下傳感器的新型單晶體，便具有非常好的壓電性能。當普通材料放置在溫度為250 °C的地下時，會發生相變並失去性能。由於新製造的材料具有較高的相變溫度，因此可以承受地下溫度，非常適用於石油檢測等應用。該團隊目前正在與業界合作，以獲得資金來繼續發展其應用技術。

團隊還致力於研究儲能材料，如鋰離子電池、超級電容器和太陽能電池。黃博士將富含鋰的層狀氧化物譽為「未來的正極材料」，因為它們提供的能量密度遠高於現有的能量密度。但是他又提醒，仍然有很多問題需要克服，例如結構不穩定性、氧氣析出、電壓衰減以及充電和放電期間的低鋰動力。儘管如此，研究結果表明這些材料有希望在五年內進入市場。

黃博士的研究中最重要突破之一是二氧化鈦納米管光子晶體的開發。他將這些晶體比喻為鏡子，但可以對光子帶隙加以控制，在有限的波長範圍內選擇性地反射光線。納米管可用作染料敏化太陽能電池中的折射器，而染料敏化太陽能電池的吸收光譜非常窄，可以顯著提高能量轉換效率。雖然最近出現的鈣鈦礦太陽能電池在一定程度上掩蓋了這項技術的光彩，但黃博士相信很快就能找到新的應用。



# Interactive Textiles for Communication and Well-being

– Interview with Dr Jeanne Tan,  
Associate Professor, Institute of Textiles and Clothing

By weaving polymeric optical fibers woven into textiles, with integrated sensors and remote controls, **Dr Jeanne Tan** creates interactive materials that can be incorporated into fashion and products. The idea is to use conventionally passive textiles as a means of communication for the engagement of the user, environment and viewer.

Recently, Dr Tan was investigating hybrid design processes in collaboration with the Royal College of Art in London. She explained that although the technology to produce wearable smart items has existed for some time, it often seems like a cumbersome add-on. Interdisciplinary collaboration is needed to seamlessly integrate the design and technology. The resultant research was selected to be shown at the digital design event at the Victoria and Albert Museum, London in May 2018.

The technology is also being used to produce interactive textiles to improve well-being. In collaboration with H.K.S.K.H. Lok Man Alice Kwok Integrated Service Centre, Dr Tan and her team are working to create props multisensory environments, especially for clients in the early stage of dementia. The work involves co-creating interactive textiles that are embroidered and woven with different textures that encourage tactile and visual stimulation. The research works had been showcased at London Design Week 2018 and GeronTech and Innovation Expo cum Summit 2018.

In spring 2019, her collaborative research on interactive materials for universal clothing, with Parsons School of Design



will be exhibited at the Arnold and Sheila Aronson Galleries with support from FRF Provost's Fund at the New School. The project studies smart materials and computer aided manufacturing processes to seek clothing design solutions for aging and mobility.

Highlighting the diversity of research conducted at FAST, Dr Tan's interdisciplinary research is conducted from the perspective of a design practitioner. She disseminates her research via non-traditional research outputs in the form of artefacts and exhibitions. This format demonstrates the integral importance of design practice within the context of research. She believes that designers play an important role in pushing the boundaries of design and technology to create life enhancing products that are relevant and vital for contemporary lifestyles.

## 互動式紡織品 改善生活品質

— 陳芊瑞博士專訪  
紡織及服裝學系副教授

通過將聚合物光纖編織成紡織品，整合傳感器和遠程控制，**陳芊瑞博士**創造出可以融入時裝和產品的互動式材料。當中的設計理念是將傳統紡織品轉化成一種溝通媒介，在用戶、環境和觀眾之間搭建共同參與互動的平台。

近期，陳博士正與倫敦皇家藝術學院合作研究多學科交叉融合的設計過程。她解釋，雖然生產可穿戴智能產品的技術已經存在了一段時間，但大多數看起來都像一件累贅的附加品，因此需要跨學科協作整合設計和技術。陳博士的研究成果於2018年5月在倫敦維多利亞與亞伯特博物館的數碼設計展覽中展出。

該技術亦用於生產互動式紡織品以改善人類福祉。陳博士及其團隊與香港聖公會樂民郭鳳軒綜合服務中心合作，為早期失

智症患者創造多感官環境道具。該項目利用刺繡和機織技術設計出不同紋理的互動式紡織品，以激發使用者的觸覺和視覺刺激。研究成果更於2018年倫敦設計週和2018年樂齡科技博覽暨高峰會中展出。

2019年春季，紐約設計展館Arnold and Sheila Aronson將展出由陳博士與帕森設計學院合作研究的互動式材料。該研究結合了智能材料和計算機輔助製造工藝，為長者及行動不便的人士提供合適的服裝設計。

應用科學及紡織學院鼓勵多元化的研究項目，陳博士的跨學科研究由設計從業者的角度出發，打破傳統局限，以展覽製成品的形式展示她的研究成果，藉以證明設計實踐在研究中的重要性。設計師為了改善生活品質，不斷突破設計和技術的界限，於當代新產品研發方面扮演重要的角色。

# World's first conference on the integration of fashion and artificial intelligence



✂ The Conference was inaugurated by Dr Bernard Chan, Under Secretary for Commerce and Economic Development, HKSAR Government; Dr Lam Tai-fai, Deputy Chairman of PolyU Council; Prof. Timothy W. Tong, President of PolyU; and Mr Zhuang Zhuo-ran, Vice President of Alibaba Group.

ITC organised a first-of-its-kind academic conference, titled 'Artificial Intelligence on Fashion and Textile Conference 2018' (AIFT), with Alibaba and The Textile Institute, UK on July 4. The 4-day conference attracted over 250 researchers, engineers, practitioners and IT professionals from the AI and fashion fields. The plenary speakers of the conference were leading scholars and professionals from China, the UK and Australia who shared their insight and research findings on the applications of AI in the fashion business.

To solve the imminent issues in the applications of AI in the fashion and textile supply chain, ITC and Alibaba also organised a global competition called 'FashionAI Global Challenge 2018'. More than 6,000 researchers and engineers from 42 countries competed for a prize pool of RMB1.34 million.

## 全球首個國際學術會議推動時尚行業與人工智能融合

紡織及服裝學系夥拍阿里巴巴及英國紡織學會，於7月4日舉辦「人工智能與時尚紡織大會」，邀得中國、英國和澳洲的知名學者和專業人士擔任講者。為期四天的會議吸引了超過250名科研人員、工程師、從業員及資訊科技專家參加，共同探討時尚業與人工智能的最新發展及應用。

為解決應用AI在時尚領域的問題，大會同時舉辦「FashionAI全球挑戰賽」，共吸引來自42個國家、超過六千名科研人員及工程師參加，爭奪總額高達人民幣134萬的獎金。

## PolyU Opens Fashion Teaching and Learning Lab 'STORE'

In October 2018, ITC opened a retail fashion store and teaching and learning laboratory called STORE on the PolyU campus. STORE aims to provide experiential learning opportunities for students and equip them with practical knowledge for future career development. It operates in both the physical and virtual modes, currently showcasing 16 local designer brands, including popular brands developed by outstanding alumni.

### 理大實體時裝教室STORE開幕

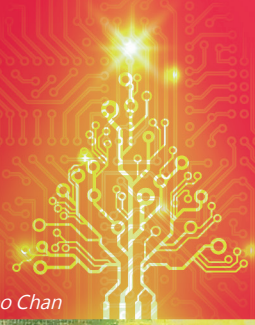
ITC於今年十月在理大校園開辦實體時裝教室「STORE」，旨在為學生教授課堂理論之外，提供實踐經驗的難得機會。STORE設有實體店及網上商店，現時共展示十六位本地設計師的作品。





# Joy TO THE WORLD

Greeting Card designed by Kapo Chan





Let's make your greeting card to send your best wishes to your families and friends!

快來DIY你專屬的賀卡,贈送給親友吧!







## FST 10<sup>th</sup> Anniversary Homecoming Dinner

The Department of Applied Biology and Chemical Technology (ABCT) organised a Homecoming Dinner at Hotel ICON on the 19<sup>th</sup> October 2018, to celebrate the 10<sup>th</sup> Anniversary of the BSc in Food Safety and Technology programme. Over 240 FST alumni, current and former faculty members and industrial partners attended to review the programme's development and strengthen the connection between alumni, their alma mater and industry. Prof. Samuel Lo, Head of ABCT, and Prof. Man-sau Wong, Associate Dean of our Faculty, delivered welcoming speeches. Dr Gary Cheung, Department Alumni Liaison Officer, introduced the activities and duties of the ABCT Alumni Association. Three outstanding alumni were invited to share their success stories in academy, industry and government after graduation. Through their sharing, students and alumni could learn from their peers.

The increasing emphasis on risk-based decision-making and the nature of global food supply have further facilitated the use of risk-based approaches to systematically address food safety issues worldwide, creating strong demand for

comprehensive training, particularly in "Global Food Safety Management" and "Risk Analysis". In view of this, the ABCT is launching a one-year full-time taught postgraduate programme, "Master of Science in Global Food Safety Management and Risk Analysis" in 2019/20. This programme aims to provide unique training on global food safety management and risk analysis for science/technology graduates who want to develop expertise in food safety. The programme will offer students advanced knowledge of international food standards, laws and regulations, as well as the newly emerging hazards affecting food safety from a global perspective. It will equip students with key concepts and practical skills to implement risk-based food safety management systems (e.g., ISO22000) within multi-national food companies. Excellent job prospects, particularly in the food, health and agricultural industries, related government agencies and research institutes in Hong Kong, mainland China and the region, will be available to graduates.

### 食品科技與食物安全理學士課程成立十週年慶祝晚宴

為慶祝食品科技與食物安全（榮譽）理學士學位課程成立十週年，應用生物及化學科技學系（ABCT）於2018年10月19日假維港薈酒店舉辦盛大的晚宴，讓歷屆校友可藉此機會與師長、同窗好友及業界賢達聚首一堂，一同回顧學系多年來的發展，藉以加強校友和業界間之聯繫交流，並發掘更多合作機遇。當晚，超過二百四十位師生一同慶祝FST踏入第十年，場面盛大。學系系主任盧俊立教授及學院副院長黃文秀教授於晚宴中致感謝辭。學系舊生會代表張光澤博士於晚宴中分享會務及來年活動，而三位校友亦分享他們畢業後於學界、業界及政府部門的成功故事，讓在學同學從中向前輩學習。

近年食品行業愈來愈重視以風險為本的決策方法和全球糧食供應問題，促進了業界採用以風險為本的取向，以

更有系統地處理世界各地的食物安全問題。有見於市場能夠提供全面的「環球食品安全管理」和「風險分析」的深造培訓課程需求殷切，學系將在2019/20學年開辦為期一年、全日制「環球食品安全管理及風險分析理學碩士學位」課程。該課程旨在為有志於食品安全行業發展的畢業生（主修科學/科技）提供獨有及專業之環球食品安全管理及風險分析課程。課程將為學生提供有關國際食品標準、法律和法規方面的專業知識，以及深入討論與全球食品安全有關的重大和新近顯現的危害。課程將為學生提供於跨國食品公司內實行以風險為本之食品安全管理系統（例如 ISO22000）所需的重要概念和實際技能，期望學員在畢業後能於香港、內地和區內之食品、保健和農業界及相關政府機構和研究機構具有優秀的工作前景。





# Teaching philosophy : *To teach is to learn twice*

“Curiosity leads to learning. If we can arouse the curiosity of students, they will search the answers by themselves.”

**Dr Jim Kwok Lung, Michael,**  
Teaching Fellow, Department of Applied Physics

## ***“To teach is to learn twice”***

– Joseph Joubert

I believe that one cannot really “teach” students the knowledge, but can only provide conditions in which they can learn. If students find it interesting, they will learn by themselves. Therefore, my approach in “teaching” is to construct an environment for students to learn. It is, sometimes, achieved by performing the “peer instruction”. Students are asked to answer some multiple-choice concept questions which are related to known areas of common confusion or misunderstanding via the uReply. They will then work in groups to arrive at a consensus for a second submission after a brief explanation from the instructor. This peer-based group discussion often results in students explaining the concepts and providing concrete arguments and clarifications to their classmates who answer incorrectly at first. “To teach is to learn twice”. When the students try to defend their answers and convince others, they need to review the concepts and reorganize their arguments. This urges students to review their understanding thoroughly. I will then debrief with the students to further consolidate their understanding of the concepts. Teaching and learning become an exchange, not a one-way from teacher to student. My ultimate goal is to train the students to “learn to learn”.



Sometimes, I will ask students challenging questions which may seem opposite to their intuition. Let an object fall by its own weight, how fast can it fall? “Free fall with the acceleration of gravity, i.e.  $9.8 \text{ m s}^{-2}$ ” which is the common answer from the students who have studied physics before. Believe it or not: a rotating rod falls faster than a free-falling coin! Want to know why? Take a look on “<https://sciencedemonstrations.fas.harvard.edu/presentations/falling-faster-g>”. It may need a little bit of physics background to fully understand it. You may come and study the University Physics I, or just drop by my office and I will explain it to you.

## ***“I hear and I forget, I see and I remember, I do and I understand”***

– Confucius

Lecturing is still inevitably an essential part of teaching although it may not be the most efficient means. Visualization can enhance ones’ memory and even understanding of concepts. Therefore, I am keen on playing “magic” to make physics concepts visualized. One of the “magic” I usually performed during the class is shown in the figure – [a soda-can in a seemingly impossible configuration](#). When the students expressed “wow” or clapped their hands after seeing it, I knew that their curiosities have been awakened and they were ready to learn.

## ***“Education is not the learning of facts but the training of the mind to think.”***

– Albert Einstein

## ***“Education is not the filling of a pail, but the lighting of a fire”***

– William Butler Yeats

Curiosity leads to learning. If we can arouse the curiosity of students, they will search the answers by themselves.

In my teaching life in PolyU over the years, there are many



# 教學理念： 教學相長

— 詹國龍博士，  
應用物理學系專任導師

「好奇心就是最好的老師。激發學生的好奇心，他們便會主動尋找答案。」

「教學相長。」

——約瑟夫·儒貝爾 (Joseph Joubert)

我相信任何人都無法真正「教授」學生知識，只能提供促進學習的條件。如果學生覺得有趣，自然會主動學習。因此，我的「教學」方法是為學生創造有利學習的環境。有時，我會採用「同儕教學法」，即透過 uReply 讓學生回答一些平時容易混淆概念或與常見錯誤有關的多項選擇題。在導師進行簡要說明後，同學分組合作，達成共識，然後進行第二次作答。這種同儕分組討論通常會讓學生向第一次未能得出正確答案的同學講解概念，提出具體論據及解釋。所謂「教學相長」，同學在嘗試捍衛自己的觀點並說服他人時，便需反思這些概念，並重新組織起論據，這促使他們透徹地檢視自己對相關知識的領悟。接下來，我會向學生再作說明，以便進一步鞏固他們對相關概念的理解。教學與學習是互相交流，不是單向地由老師教授學生。我的最終目標是訓練同學「學會學習」。

「教育不是注滿一桶水，而是點燃一把火。」

——威廉·巴特勒·葉芝 (William Butler Yeats)

好奇心就是最好的老師。激發學生的好奇心，他們便會主動尋找答案。有些時候，我會問同學一些具挑戰性的問題，而這些問題可能有悖



於他們的直觀認知。一個物體以自身重量下墜，下墜速度有多快？「依靠重力加速度自由下墜，即  $9.8 \text{ m s}^{-2}$ 」是學過物理的學生給出的常見答案。信不信由你：一根旋轉的下墜速度比一個自由下落硬幣的下墜速度要快！想知道為什麼嗎？

請登入 <https://sciencedemonstrations.fas.harvard.edu/presentations/falling-faster-g> 查閱。

你可能需要具備一些物理知識才能充分理解原因。你可來聽大學物理 I 課，或到我辦公室來，我非常樂意作出解釋。

「不聞不若聞之，聞之不若見之，見之不若知之。」

——孔子

雖然講授可能不是最有效的教學方式，但卻是不可或缺的一部分。視覺可以強化概念記憶，甚至加強理解。因此，我喜歡「變魔術」，將物理概念呈現在學生眼前。我有一個常用的「魔術」（如圖所示：一個處於看似不可能狀態的易拉罐）。當同學在看到這個易拉罐後表現出「哇」或鼓掌時，我知道他們的好奇心被喚醒了，學習的動力就來了。

「教育的真諦不是了解諸多事實，而是訓練大腦去思考。」

——愛因斯坦

在理大的教學生涯中，有趣而難忘的回憶不勝枚舉。我記得一次為工程物理學課程的學生上力學課的情景。這天課程的主題是萬有引力，我援引了太空之旅的例子，雖然這不在「教學大綱」範圍內，但我認為過程很有趣。幾名學生課後留下來問了我一些問題。解決問題後，其中一名學生問我，「您認為我們的宇宙中存在有智慧的外星生物嗎？」「你們認為呢？」他們用論證表達了各自的觀點，我也分享了我的看法及背後的邏輯。我們就這個主題討論了很久。這件事讓我印象非常深刻，因為我感覺到我的教學目標一步步推進。同學並不只關心考試內容，他們也渴望追求更多的知識。

「掌握學習方法是畢生最重要的技能。」

——托尼·博贊 (Tony Buzan)

amusing and indelible memories. I remember once when I taught Engineering Physics students the topic of universal gravitation, I illustrated the concept with examples of space travel which was out of the "syllabus". Several students stayed after the class and asked me questions on the subject contents. After solving the problems, one of the students asked me, "Do you believe that there are intelligent extraterrestrial lifeforms existed in our universe?" "What do you think?" They expressed their thought with reasoning and I also shared my ideas with the logics behind with them. We had a long discussion over the topic. This impresses me so deeply because I feel that my goal in education is impelled bit by bit. Students are not just caring what would be examined but pushing frontier of knowledge.



“Learning how to learn is life’s most important skill”

— Tony Buzan



## Does Good Posture Matter?

“ The design process of posture correction girdle involved 3D modelling of the trunk shape of the patients, girdle design, material selection, fabrication of the girdle, passive and active modes of correction and a clinical trial. ”



**Dr Joanne Yip,**  
Assistant Professor, Institute of Textiles and Clothing

Are you becoming a hunchback because you are addicted to your smartphone? Has anyone told you to 'sit up straight or you will have back pain'?

Good posture usually refers to sitting up straight or keeping our bodies upright. However, individuals with scoliosis may not be able to maintain good posture, as they have a C- or S-shaped curve in their spine. This spinal deformity, usually diagnosed in rapidly developing preteens and teens, is called adolescent idiopathic scoliosis (AIS). AIS affects up to 4% of adolescents in the early stages of puberty and has a total prevalence range of 0.4–2.5% in Asia. This condition can be up to 11 times more common in girls.

Currently, those with substantial deformities (i.e., a spinal curve between 25 and 40 degrees) are given treatment in the form of a hard brace made of rigid plastic. Surgery is recommended for patients with extreme deformities (i.e., a spinal curve that exceeds 40 degree).

Although there are no well-accepted reasons for AIS, poor posture may be a factor that contributes to pain and further deformity among AIS patients. Unfortunately, there is no garment available on the market that offers the right kind of support for this condition by controlling and training posture. To meet this need, I developed a



posture correction girdle. It is meant not to replace the hard brace but to be used to improve posture among preteens and teens with early scoliosis and prevent the worsening of the spinal deformity.

In 2012, I carried out a multi-disciplinary collaborative study that combined clinical experience with textile and materials sciences to design a posture correction girdle. The design process involved 3D modelling of the trunk shape of the patients, girdle design, material selection, fabrication of the girdle, passive and active modes of correction and a clinical trial. The girdle is equipped with sensors that monitor posture on a daily basis. The results of a 6-month wear trial showed posture improvements that may have resulted from the supportive and corrective forces exerted by the tightly-fitting girdle with the use of elastic straps, plastic resin bones and semi-rigid foam padding.

Some limitations of this posture correction girdle for AIS patients were soon found, especially based on the comments of orthopaedic doctors and patients who wanted to find an alternative to the hard brace. With support from my collaborators, I obtained funding from the government and the industry to develop several products, including a body mapping tank top equipped with a biofeedback system, functional intimate apparel and ergonomic brace wear (Fig. 1). To prevent the progression of spinal deformity, three points of pressure and traction forces are applied through the ergonomic brace wear with strategically inserted rigid components, like pre-shaped shape memory alloys and padding. The supportive shoulder straps and waist band can exert additional corrective and compressive forces on the torso and spine. In addition, the seamless design allows the brace to be worn next to the skin, which reduces the weight of the brace, offers a soft feel and prevents marking for a smooth look. Bonding and ultrasonic welding technologies are applied to eliminate seams and stitches. Therefore, compared to conventional bracing treatment, the new ergonomic brace wear is more aesthetically pleasing and comfortable to wear, which may improve compliance with brace treatment.

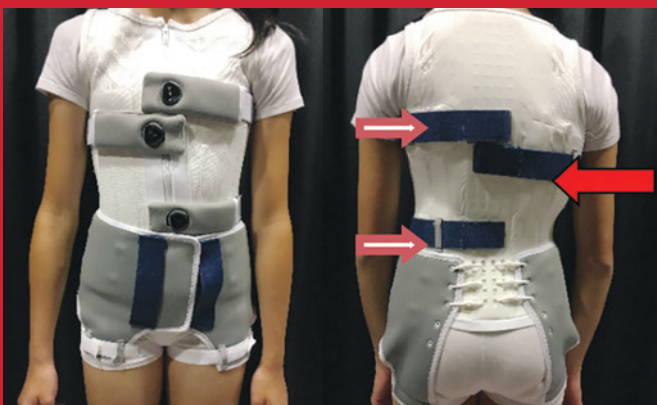


Fig. 1 Ergonomic brace wear for AIS 符合人體工學的矯正衣

## 良好的姿勢 是否重要？

— 葉曉雲博士  
紡織及服裝學系助理教授

設計矯正束身衣過程涉及對患者的軀幹進行三維建模，同時包括束身衣的設計、選料和製造、被動和主動矯正模式以及臨床試驗。

你是否因為對智能手機成癮而變成了駝背？有人曾告訴你「坐直，否則你會背痛」嗎？

良好的姿勢通常是指坐直或保持身體直立。然而，患有脊柱側彎的人可能無法保持良好的姿勢，因為他們的脊柱會呈C形或S形曲線。青少年原發性脊柱側彎(AIS)是指在青春前期和快速發育成長的青少年時期發生的脊柱變形。在青春期的早期階段，它影響高達4%的青少年，亞洲的總患病率介乎0.4-2.5%之間，女孩的病例比男孩多達11倍。

到目前為止，患有中度脊柱側彎者（即脊柱曲線在25和40度之間），便需要佩戴以塑料製成的硬支架。對於嚴重脊柱側彎（即脊柱曲線超過40度）的患者，則建議進行手術。

雖然沒有明確的致病原因，而不良姿勢是導致患者疼痛和進一步變形的其中一個因素。不幸的是，市場上還沒有任何合適的功能服裝可提供適當的姿勢控制和訓練。所以，我研發姿勢矯正束身衣不是為了取代傳統硬支架，而是為了改善早期脊柱側彎青少年的姿勢，並阻止他們脊柱側彎的惡化。

自2012年，我開展了一項多學科合作研究，將臨床經驗與紡織和材料科學相結合，設計出姿勢矯正束身衣。設計過程涉及對患者的軀幹進行三維建模，束身衣的設計、選料和製造、被動和主動矯正模式以及臨床試驗。束身衣更配備了傳感器，可以每天監測病人的姿勢。經過為期六個月的穿著實驗，病人的姿勢得到改善，這可能是由於使用彈性帶、塑料骨和半硬質泡沫填充物施加的支撐力和矯正力的結果。

透過骨科醫生的評論以及患者尋求替代硬支架治療的願望，AIS患者的姿勢矯正束身衣的局限性很快就被發現了。在研發團隊的支持下，我成功獲得政府和業界的資助，開發更多脊柱側彎患者專用的產品，例如配備生物反饋系統的智能背心和符合人體工學的矯正衣（附圖一）。為了防止脊柱側彎惡化，矯正衣加入剛性部件（例如預成形的形狀記憶合金(SMA)和襯墊），通過施加三點壓力系統和牽引力，在軀幹和脊柱上施加額外的矯正和壓力。此外，無縫設計允許矯正衣緊貼皮膚，有助於減輕支架的重量，以及提供柔軟的質感。這款矯正衣採用了黏接和超聲波焊接技術來消除矯正衣上的接縫和縫線，因此，與傳統的支架相比，更符合人體工學，美觀與舒適兼備，從而改善佩戴支架的依從性。



## Establishment of University Research Facility in Big Data Analytics

In May 2018, the Department of Applied Mathematics (AMA) and Department of Computing (COMP) joined forces to establish the University Research Facility in Big Data Analytics (UBDA), the first university-level research facility in Big Data Analytics in Hong Kong, dedicated to cross-disciplinary research collaborations, teaching and learning and partnership with industry.

By analysing huge volumes of cluttered data from multiple data sources, researchers in Big Data Analytics reveal hidden patterns, explore unknown correlations and conduct forecasting, which results in better decision making, resource use and planning. This technology has become essential in our economy and society, and its applications are growing in a variety of areas and industries. Managed by big data experts from AMA, COMP and other disciplines, UBDA will provide infrastructure and tools to meet the increasing demand for computing resources and expertise for big data research and applications. In addition, UBDA will organise up-to-date training workshops and advanced seminars for the research community and industry partners.

Homepage: <https://ubda.polyu.edu.hk/>

### Programme revamp: BSc (Hons) in Investment Science and Finance Analytics (JUPAS code: JS3806)

Facing keen competition, regulatory constraints and customer needs, financial institutions are seeking new ways to leverage technology innovation to enhance efficiency and improve services. Big data analytics is now being widely used in the financial sector to make better investment decisions with consistent returns. In view of this situation, AMA has enhanced its 4-year UGC-funded full-time undergraduate programme 'BSc (Hons) in Investment Science and Finance Analytics', by incorporating a computer science component. It combines expertise that cuts across the core disciplines of mathematics, statistics and computer science and prepares students for careers in investment and finance analytics. The revamped programme is now accepting applications through the JUPAS scheme for 2019/2020 intake. Secondary students who are enthusiastic about mathematics and statistics and who want to build a successful career in the financial industry should not miss the opportunity to apply!

Homepage: [www.polyu.edu.hk/ama/ug/63426](http://www.polyu.edu.hk/ama/ug/63426)

## 理大成立大數據分析中心實驗室

應用數學系與電子計算學系今年五月成立了「大數據分析中心實驗室」，這是本地首間服務及支援大學各學系及部門的大數據分析研究設施，旨在鼓勵理大的跨學科研究、就大數據分析的應用建立理大與業界緊密的合作關係，並推動本地的大數據教育。

大數據分析是透過分析海量數據，從而發現當中的隱藏模式和未知的關聯，並預知未來的趨勢。此技術有助優化決策、資源運用和計劃，在現今經濟和社會不可或缺，其應用亦在不同領域和行業持續增加。大數據分析中心實驗室由理大的應用數學系、電子計算學系及其他學系的大數據專家管理，配備最先進的電腦設備和工具，提供相關顧問服務和技術支援，並會舉辦培訓課程、研討會，協助理大的科研社群和業界協作夥伴建立大數據分析和處理的模型、算法和平台，就不同研究題目和應用難題提出創新的解決方案。網頁：<https://ubda.polyu.edu.hk>

### 課程改革 - 投資科學及金融分析(榮譽)理學士 (JUPAS code: JS3806) 課程

面對同業間激烈的競爭、嚴謹的監管機制及顧客需求，金融機構紛紛尋求創新的方案，希望透過創新的資訊科技改善服務之餘更可提升工作效率。現時金融業界已經廣泛地利用大數據分析以制訂更好的投資策略。有見及此，應用數學系重整了其四年全日制學士學位的課程架構及內容，注入了計算機科學的新元素，推出「投資科學及金融分析(榮譽)理學士」課程。課程結合了數學、統計學與電子計算的專業知識，為有意投身投資及金融分析業的同學建立穩扎基礎。課程現正接受2019/2020年度入學申請，歡迎對數學統計有興趣、並有意開展金融分析事業的應屆香港中學文憑試學生透過大學聯招辦法申請。

網頁：[www.polyu.edu.hk/ama/ug/63426](http://www.polyu.edu.hk/ama/ug/63426)



## The Greater Bay Area Workshop on Computational Optimization 海外和大灣區的世界頂級計算優化專家交流研討會

The purpose of this workshop is to provide a platform for world leading experts in computational optimization from overseas and the Greater Bay Area to exchange ideas and share their views on solving big data optimization problems in wide application areas such as science, engineering, data science, risk management, and FinTech. It will further strengthen the optimization research activities in PolyU to produce more influential results.

是次研討會提供平台予海外和大灣區的世界頂級計算優化專家交流研究成果，並分享他們對於如何解決源自科學、工程、資料科學、風險管理和金融科技等廣泛應用領域中的大資料優化問題的見解。會議將進一步加強理大的優化研究並產生更具影響力的成果。

23-24  
Jan  
2019

9am-6pm  
AMA, PolyU

## ABB Homecoming Dinner 應用生物兼生物科技課程晚宴聚餐

Over the past decades, the Applied Biology with Biotechnology Programme under ABCT has successfully groomed numerous bright scholars, successful entrepreneurs and science professionals for the community. It is now time to celebrate the achievements. Our Department is delighted to host a Homecoming Dinner on 21 June 2019. This special occasion for remembrance aims to reunite alumni, current and former faculty members, students and friends of ABB, and to commemorate our achievements and important milestones throughout the years.

為慶祝應用生物兼生物科技課程成立數十載，應用生物及化學科技學系 (ABCT) 將於2019年6月21日舉辦晚宴聚餐，邀請歷屆校友、師長及社會賢達出席，分享昔日點滴並一同見證學系多年發展成果，藉此加強校友的歸屬感及促進業界間之聯繫交流，建立良好的關係網絡。

21  
Jun  
2019

8pm  
Silverbox Ballroom, Hotel ICON (TBC)

## ITC PhD student won at the first annual Athanasiou ABME Student Award

— Chan Wing Yu, Jess  
PhD student, Institute of Textiles and Clothing

Chan Wing Yu, Jess, a PhD student of ITC under the supervision of Assistant Professor, Dr Joanne Yip, won the Student Award at the first Athanasiou Annals of Biomedical Engineering (ABME) of the Biomedical Engineering Society (BMES) Annual Meeting in Atlanta, Georgia, US in October 2018.

86 articles published by undergraduates and postdocs around the world were attracted. Only six were awarded. Jess is the only doctoral candidate from Asia. Other awardees are from MIT, Imperial College London, Virginia Tech and Delft University of Technology.

The awarding winning paper titled "Mechanical and Clinical Evaluation of a Shape Memory Alloy and Conventional Struts in a Flexible Scoliotic Brace" compares and evaluated the shape memory alloy and traditional metal and plastic inserts for non-invasive orthopaedic device.

### ITC博士生於「生物醫學工程年度會議」獲取佳績

紡織及服裝學系博士生陳穎如 (Jess) 早前在助理教授葉曉雲博士的指導下，於美國佐治亞州亞特蘭大舉行的「生物醫學工程年度會議」(BMES) 榮獲第一屆Athanasiou Annals of Biomedical Engineering (ABME) 學生獎。

本年度ABME吸引了86篇來自世界各地的論文，當中只有六篇獲頒此獎項。Jess是唯一來自亞洲地區的博士生，其他得獎者均來自麻省理工學院、倫敦帝國學院、維珍尼亞理工學院暨州立大學，及代爾夫特理工大學。

獲獎論文題目為 "Mechanical and Clinical Evaluation of a Shape Memory Alloy and Conventional Struts in a Flexible Scoliotic Brace"。當中對非侵入性矯形支架的形狀記憶合金和傳統金屬與塑膠支撐物料作出比較與評估。



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



# LEE Wing Lun, Dexter 李永麟

– BSc(Hons) in Applied Biology with Biotechnology

Time flies, and I am proud to be a final-year undergraduate in the Department of Applied Biology and Chemical Technology. For the past three years, I have received generous help in building academic knowledge from professors. I am grateful to have been selected to participate in an overseas internship at McGill University. During the six-week internship, my lab techniques and multi-tasking skills improved. I managed to finish a mini-project regarding the hippocampal engram, which reinforced my interest in becoming a neuroscientist with the goal of developing exercise pills.

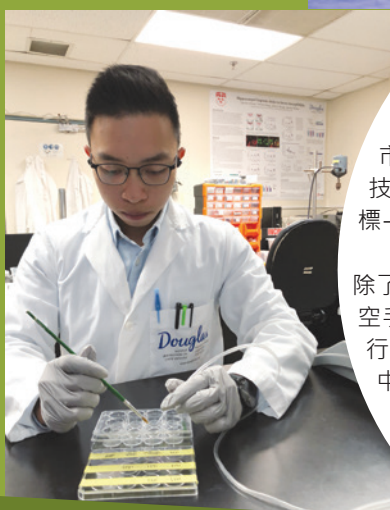
Apart from my academic achievements, PolyU has also encouraged me to demonstrate sportsmanship by making it possible for me to be a PolyU Karatedo Team member. Our team worked hard during the intensive training in Tottori, Japan and won the overall championship at the USFHK Competition. Furthermore, I was given numerous chances to represent the sports team by performing at important events, such as the HKPU-University Fellows Association Gala-Dinner. Through these performances, close bonds and team spirit were formed within the team.



Photo: LYDP

轉眼間，我已經在香港理工大學應用生物及化學科技學系度過難忘的三年，感謝學系中每一位導師所傳授的理論和技術。在剛剛的暑假中，我有幸得到學系的支持，前往加拿大蒙特利爾市麥基爾大學實習。在六星期的實習中，除了在實驗技巧和解難能力兩方面均有進步外，我更確立了未來目標——修讀神經科學以研究運動對於神經傳遞的影響。

除了學術成就外，學系亦一直推動我的體育發展。作為大學空手道校隊成員，我有幸在假期時與隊員前往日本鳥取進行訓練，並協助隊伍於一年一度的香港大專空手道比賽中取得全場總冠軍。此外，理大亦給予我和隊員多次機會在學校重要活動，例如在17/18獎助學金捐贈答謝茶聚中表演。這不但是理大對我們的肯定，更有助於建立隊員之間的默契和成長。最後祝願各位也能在理大創造美好的回憶。



# QI Ji 祁冀

– BSc(Hons) in Engineering Physics



This summer, I travelled to Michigan State University and joined a simulation research group in the Department of Chemical Engineering and Materials Science. With instruction from Professor Qi Yue and the PhD students in her group, I got an authentic taste of PhD life in the United States, and I fell in love with it. During my 11 weeks there, I performed Density Functional Theory calculations to compare Li<sub>2</sub>O and Li<sub>2</sub>S as component materials for the Solid Electrolyte Interlayer of lithium-ion batteries. With the help of the professor and PhD students, I obtained some exciting results and gave a 30-minute presentation for our group, which received applause from everyone.

Through this precious experience, I found that my previous problems were solved. When I devoted myself to the project and tried to make progress, I gained a sense of achievement, and I believe that my knowledge and intelligence were put to good use. More importantly, what I am working on can make a great difference in the world.

這次暑假，我有機會到密西根州立大學做暑期科研，並加入了化學工程及材料科學系的一個以電腦模擬為主要的研究小組，在那裡的經歷讓我愛上科研並排解了我對職業的困惑。在密西根為期十一個星期的工作中，我的任務是做基於密度泛函理論的計算，對比氧化鋰和硫化鋰作為固體電解質層的各方面不同；在教授和博士生們的悉心幫助下，我的項目取得了一定的成果，並進行了一個三十分鐘的組內展示。這次寶貴的經歷讓我體會到從事科研時的快樂，現在的我不再迷茫，決定把自己的時間及精力投入到電池領域科研工作中，為社會創造價值。



# YUEN Tsz Pang, Patrick 袁子鵬

– MPhil, in Applied Mathematics

I am glad to be a student of the Department of Applied Mathematics. The programme not only provides me with extensive knowledge of statistics and finance but also enriches my programming skills through workshops on various statistical software applications, such as R, SAS and SPSS. The department also provides plentiful internship opportunities that help me extend my knowledge and enhance my interpersonal and communication skills through workplace experiences. I am grateful to have had opportunities to participate in cutting-edge research projects on data analytics with excellent researchers in the department. These projects have strengthened my research skills, expanded my horizons and inspired me to pursue postgraduate study. Finally, I would like to express deep gratitude to my professors for their guidance, patience and continuous support of my studies.

我很高興成為應用數學系的學生。我在這裡不僅獲得了豐富的統計和財務知識，還通過參加各種統計軟件（如R、SAS和SPSS）的工作坊，掌握了有用的編程技巧。學系還提供各種實習機會，幫助我提高人際關係和溝通技巧。我亦有幸與學系的優秀研究人員一起參與數據分析的尖端研究項目，這些研究項目增強了我的研究技巧，拓展了我的視野，並啟發我開展學術科研之路。最後，我衷心感謝教授們對我的耐心指導及支持。



# Ho Wing Ki, Janice 何詠琪

– BA(Hons) in Fashion & Textiles (Fashion & Textile Marketing)



入大學前，我總是期待報讀自己真正有興趣的科目，學習專業的知識，但後來卻認為學業上沒有挑戰性。直至參加不同類型的活動，才發現很多書本以外的知識非常值得學習，正是這些經驗塑造出現時的我和自信。紡織及服裝學系提供大量機會，當中我參加了一個國際性比賽Future Retail Challenge，可算是其中一個最難忘的經驗。校園就好比社會的縮影。在大學，我們已是成年人，遇到困難時需要批判性，依靠自己的能力。這一切教會了我日後的為人處世之道，推動我努力向上，能夠彰顯公義。

Before being admitted to the university, I had always hoped to enrol in a programme that would intrigue me and teach me knowledge that would turn me into a professional. The university, however, turned out to be similar to my previous schools. It was not intellectually challenging until I participated in a variety of activities. I learned a great deal outside books, and all of these experiences at PolyU shaped my personality and confidence. ITC provided a plethora of opportunities, and I joined an international competition called the Future Retail Challenge, which was one of the most amazing experiences of my life. The university is a miniature of society. We are adults, and whatever barriers we face, we need to be critical and self-reliant. All of these experiences taught me what kind of person I would like to be in the future. They motivated me to climb higher so that I can have the power to pursue justice.

# SSMSC Award Presentation Ceremony and PolyU Science Star Summer Camp 2018

The SSMSC Award Presentation Ceremony 2018 was held successfully on July 3. This year, we are thrilled to have over 280 secondary schools participated in the competition, with over 6,500 participants for four subjects. The Best School Award goes to Diocesan Boys' School. The PolyU Science Star Summer Camp 2018 brought together top performers from both Hong Kong and Mainland China! The camp provides young talents a precious opportunity to engage in applied science and fashion technology learning, and have hands on experience in doing research work under the guidance of our professional research teams.



## 高中數理比賽頒獎典禮及 理大科學新星培育計畫2018夏令營



應用科學及紡織學院高中數理比賽頒獎典禮於2018年7月3日順利舉行。今年，共有超過二百八十間學校參與，近六千五百位學生參加高中數理比賽，反應相當熱烈，而「最傑出學校獎」則由拔萃男書院奪得。來自香港及內地不同省市的一眾得獎者，透過參加「香港理工大學科學新星培育計畫2018夏令營」，深入學習和探究不同範疇的應用科學及服裝科技知識，透過科研和交流活動，從中得到啟發。



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

Room TU502, Yip Kit Chuen Building  
The Hong Kong Polytechnic University, Hung Hom, Kowloon, Hong Kong

Tel (852) 2766 5057-5059  
Fax (852) 2362 2578  
Email *For Student Enquiry:*  
scastenq@polyu.edu.hk

*For General Enquiry:*  
fast.enquiry@polyu.edu.hk

