

②  
何志華為語文教學另闢蹊徑  
Attaining Fluency  
through a Sunnier Path

④  
白先勇細說《紅樓夢》  
A Closer Look at  
*The Dream of the Red Chamber*

⑦  
人機合體  
BCI  
.....

三磅的宇宙  
The Three-Pound Universe

⑧  
湯兆昇——物理勿勿理  
Tong Shiu-sing—Pitching Physics to the Public



Photo by ISO Staff





# 何志華為語文教學另闢蹊徑

**中**大校園山青水秀，一葉有意，自然是豐富的靈感泉源。不少中大任教或就讀的人，便曾以文字留下了他們與中大的段段因緣。中文系系主任**何志華**教授與「大學中文」的教師團隊於校園尋蹤覓跡，引導學生閱讀文學作品，讓文學之花綻放每個角落。

何教授執掌教鞭多年，觀察到文學教育相對不足。「我們從來沒有見過一個社會的年輕人對該國的文學完全不感興趣。中學語文課程誤用了學習第二語言的方法，偏重聽、說、讀、寫等個別語言技巧訓練。學生少有機會看好文章，欣賞中文修辭、意境與內容之美。」

## 求索之迹

為配合2012年復行四年制，中文系同年推行全新「大學中文」，作為所有中大本科生必須修讀的核心課程。何教授視之為改良中文課程的契機，「『大學中文』課程加入文學元素，讓學生對中國文學產生興趣，從而提升他們的語文能力。」何教授認為，若要達至層次較高的語文水平，須閱讀上乘的文學作品，正如英國人學好英語也會讀莎士比亞。

課程由三學分倍增至六學分，分為「大學中文(一)」、「大學中文(二)」。除了提供各類型實用文書、口語傳意等語文技巧訓練外，還通過古今文學經典閱讀，培養學生的文學情懷，為學生打下堅實的語文基礎。課程改革之初，中大曾召開研討會，向本港其他大學介紹中大的語文課程。「其他院校重視語文的實用性，唯中大堅持語文課程必須加入文學元素。」

## 因材施教

課程採用小班教學，每班約二十多人。另一重點是學院主題導向式，讓學生閱讀內容與主修範圍相近的作品。例如法律學院學生選讀陳子昂的〈復讎議狀〉，增強思辨能力。「即使學生畢業後在職場用不着中文，我們也希望借大學四年時間，引導學生感悟中文世界之美，吸收其中養分。」

意念得以成功實踐，何教授說有賴大學支持。各學院關心加入文學元素是否對學生有用，他對這個設計毫不動搖，因為他深信：閱讀文學是提升語文能力的不二法門。「學生語文能力好，擅於與人溝通，在其專業範疇上也得心應手。」

## 山城筆跡

「大學中文」以中大山水為題，編輯了《中大·山水·人文》一書，作為參考教材，並結合書中篇章設計全港獨一無二的校園文學散步，帶學生走出課室，尋訪作家筆下的中大山水。老師先與學生賞析篇章，再帶他們實地觀察，在現場進行不同形式的寫生。

中文系近年籌辦兩屆「文學中大」徵文比賽，鼓勵學生寫作。銀獎得主、藝術系三年級生**馮濟琳**的母親是中大校友，「猶記得兒時，母親帶我到新亞拾松果。當我同樣就讀中大，回憶與校園生活重疊，驅使我以文字作顏料，構成一幅畫作。」

獲獎的不限於文學院的學生，還有來自理學院、醫學院等不同專業的「大學中文」學生，像優異獎得主**許建穎**便是醫科二年級生。「大學中文」加深了他對文字的了解，「或許有人認為中文不就是廣東話，何必花時間學習。如果懂得閱讀文學，從不同角度欣賞，會發現另一道風景。」

## 寫行合一

創作者要有源源不絕的靈感，必須保持觀察世界的敏銳度。金獎得主、人類學二年級生**鄧曉懿**一年前來港讀書，未能適應新環境。在她眼中，校園的麻雀都各據一方，結成幫派。評判**謝曉虹**形容「以旁觀者的冷眼，……曲折地道出了敘述者『局外人』的心情；角度獨特，語帶機鋒，抒情含蓄而不落俗套。」曉懿笑言：「那時候的我，情感脆弱，容易被周遭事物牽動情緒。重看文章，我現在是寫不出當時的感覺了。」

「大學中文」還給了她一份意外驚喜。曉懿本就讀理學院，一直有意轉修文科，卻擔心力有未逮，「當時內心十分忐忑，無意中看到『大學中文』**胡琦**老師的訪問，得知他原來也是理科生；眼前就是一個真人版，令我勇敢踏出第一步。」

課程為三千多名本科生而設，也許有未盡完善之處。每年舉行的師生交流會，讓學生反映意見，檢討課程設計。有學生形容課程「補而不燥」，既能彌補文學知識，亦沒有帶來太大的考試壓力。何教授慶幸課程喚起了不少學生的語言自覺，他更語重心長說：「年輕人應把握機會豐富個人內涵，文學除了鍛詞煉字，還有人生的反照。他日在人生路遇上逆境，重新打開文學寶庫，總會得到共鳴和開解。」





# Attaining Fluency through a Sunnier Path

## Ho Che-wah Injects Literary Elements into Chinese Education

The CUHK campus, with its natural beauty and tranquility, gives free rein to one's thoughts and imagination. Many writers who have spent time here either as teachers or students have captured its charm in words. With Prof. **Ho Che-wah** as its architect, the Chinese language course mandatory to all CUHK undergraduates has been inspiring undergraduates across disciplines to do the same.

The Chairman of the Department of Chinese Language and Literature had long noted the relative lack of literary elements in the Chinese language curriculum in Hong Kong. 'It is heartbreaking to see young people showing little interest in the literature of their own language. Chinese is taught in the same way as that of a second language, which relies heavily on drills in listening, speaking, reading and writing. Students' literary sense rarely gets developed and so they fail to appreciate the beauty of the Chinese language in terms of rhetoric, context and content.'

### A New Lease of Life

To tie in with the reversion to the four-year normative curriculum in 2012, the Department of Chinese Language and Literature overhauled the mandatory course. Professor Ho saw it as an opportunity to put Chinese education back on the right track. 'The newly-designed course highlights the literary elements in the hope of igniting students' interest in the Chinese language and thereby promoting their language proficiency in Chinese.'

Credits of the two-semester course were doubled from three to six. In addition to providing training in practical writing and oral communication, it was designed to help students get a better grasp of Chinese culture via studying ancient and contemporary classics. At a conference where CUHK representatives introduced the new course design to its sister institutions, Professor Ho realized that CUHK is the only university in Hong Kong giving emphasis to literary elements in similar courses.

### Tailor-made Teaching

In the form of small-class seminars of around 20 students, the course adopts a faculty-based teaching approach, encouraging students to read literary works related to their majors. For instance, law students can further their advocacy skills by studying an essay by Chen Zi'ang, a renowned Tang poet. 'Even if they won't use Chinese in the workplace in the future, we hope to motivate them to explore the literary world of Chinese and be enlightened by it,' said Professor Ho.

Professor Ho attributed the success of the course to the support of the University. Some might doubt the usefulness of reading literature, but he believes it is the very key to enhancing language proficiency. 'Good language skill is the prerequisite for any kind of job. It also facilitates communication with people from all walks of life.'

### Painterly Essays

Articles inspired by the rocks and the streams of the CUHK campus were collated into a reference book for the use of the course-takers, from which a 'literary trail' was designed to deepen their understanding. The teachers would first analyse the articles with the students before taking them to the corresponding spots and guiding them to put their thoughts into words or pictures.



▲馮濟琳  
Virginia Fung

'Literary CUHK', a writing competition held by the Department, has been motivating students to write in the past years. **Virginia Fung**, winner of the silver prize and a Year 3 fine arts student, said her entry was inspired by her mother who was an alumna of CUHK. 'When I was small she took me to New Asia College to collect pine cones. The fond memories mingled with my own campus life, which became fodder for my writing,' she said.

Winners of the competition are not limited to students from the Faculty of Arts but also from various majors. **Elton Hui**, the merit awardee and a Year 2 medical student, said the course has reinforced his interest in language learning. 'There is a misconception that Chinese equals colloquial Cantonese and requires no hard work to learn. But once we get the knack of literature appreciation, we will see the world in whole new perspectives.'



▲許建穎  
Elton Hui

### Writers Born from Writing

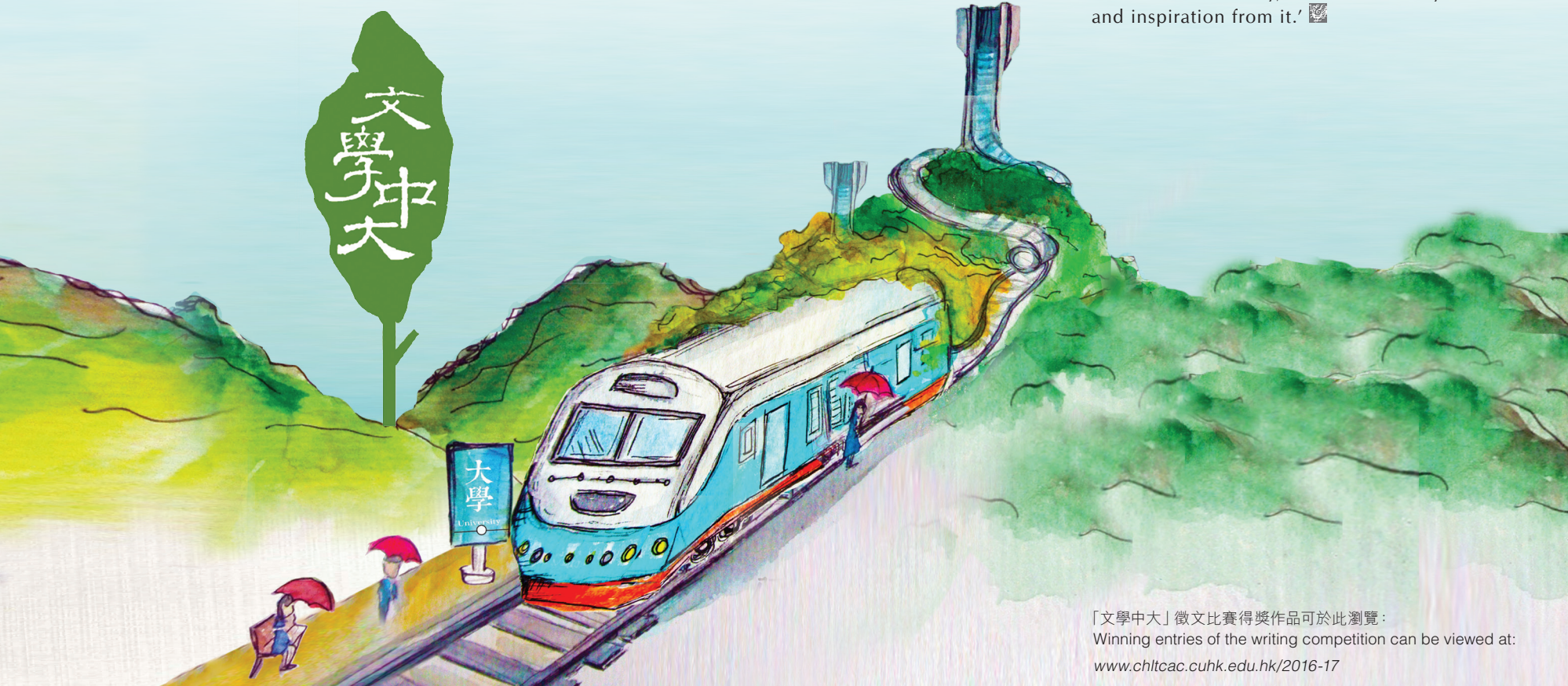
Writers must always keep a fresh eye on the world to be prepared for a visitation by the Muse. **Deng Xiaoyi**, a Year 2 anthropology student who came first in the competition, expressed in her entry the adaptation pains of a newcomer from the mainland. She wrote about sparrows territorializing different parts of campus. Ms. **Dorothy Tse**, one of the judges of the competition, commented that Xiaoyi's work 'implicitly expressed the author's feeling as an outsider through the lens of an observer in a most unique, pungent, delicate and original way.' 'I was emotionally fragile back then and easily got affected by the surroundings. I don't think I could write that again now,' said Xiaoyi.



▲鄧曉懿  
Deng Xiaoyi

The course has benefitted Xiaoyi in more ways than one. Her wish to change from a science major to an arts major had always been held back due to her lack of self-confidence. 'One day I ran across an article about one of the course teachers Prof. **Hu Qi**, and learnt that he originally set out wanting to be a scientist. His example prompted me to step out of my comfort zone.'

To evaluate the effectiveness of the course, students and teachers will meet every year to exchange views on improving the course. Some students found the course nourishing without the concomitant exam pressures. Professor Ho was pleased to find that the course has been raising students' language awareness. 'Young people should seize every chance to enrich themselves. Literature is a great trove not just of beautiful sentences but also of wisdom of life. When faced with adversity, one could always find comfort and inspiration from it.'



「文學中大」徵文比賽得獎作品可於此瀏覽：  
Winning entries of the writing competition can be viewed at:  
[www.chltcac.cuhk.edu.hk/2016-17](http://www.chltcac.cuhk.edu.hk/2016-17)





白先勇細說

# 紅樓夢

A Closer Look at  
*The Dream of the  
Red Chamber*

**白**先勇教授於1月29日至2月2日以《紅樓夢》為題主持三場公開講座，分享多年研究的體會，這是白教授首次以博文講座教授身分在中大講學。

講座吸引不少中大成員和公眾人士到來，座無虛席。中大副校長霍泰輝教授於第一講開始前致辭，指白教授魅力無比，並讚揚他為復興傳揚中華文化作出無比貢獻。

第一講以「《紅樓夢》的旨意——《紅樓夢》中詩詞與戲曲的點題功用」為題，鑑賞書中詩詞如何預示其後故事發展，書中詩詞並非裝飾，並能融入小說主體。白教授說：「《紅樓夢》是中國文化的百科全書，文化的極點。」他稱《紅樓夢》為史詩式的人生輓歌，展現乾隆時代盛極一時，「夕陽無限好」的景象，並指出書中不少人物的對比和背後象徵，例如賈政和賈寶玉的思想矛盾象徵儒家與佛道兩家思想的衝突。

第二講為「搶救尤三姐的貞操——《紅樓夢》程乙本與庚辰本的比較」，透過解讀兩個版本中形象差天共地的尤三姐，梳理對手抄脂本及程高印刷本兩種主要版本的討論。他先介紹建基於手抄脂本的庚辰本和程偉元與高鶚付印的程乙本，然後解讀在兩個版本中尤三姐性格的天壤之別。程乙本的尤三姐剛烈爽快，而庚辰本的尤三姐則是騷媚蕩婦。鑒於尤三姐最後自刎以證自身清白，程乙本中的尤三姐性格貫切如一，因此可信度高一點。白教授對比兩個版本，仔細分析尤三姐這個小角色，指出手抄本可能出現的謬誤，而尤三姐這個小角色能在如此長篇作品的中段出場而成功壓場，實屬難得。

對版本爭議的討論，延續至第三講「賈寶玉的大紅斗篷與林黛玉的染淚手帕——《紅樓夢》後四十回的悲劇力量」。白教授指，《紅樓夢》後四十回為偽作之說，實為胡適「一錘定音」；而他本人傾向相信後四十回為曹雪芹遺稿。他說，從美術觀點看，《紅樓夢》前後調子有差異也屬正常，因賈府從盛極走向衰敗，故筆調也要相應修改。他舉例闡述賈寶玉出家前披着大紅斗篷，紅色象徵紅塵與情殤，寶玉背負着情殤而揮別紅塵。林黛玉死前焚掉染淚手帕，手帕本是寶玉送黛玉的訂情信物，焚掉手帕象徵情殤極至，湮滅紅塵。白教授總結全書的細節都蘊含多層象徵意義，並強調後四十回充分體現悲劇的力量。

首兩講後，不少「白迷」都手持白教授著作排隊索取簽名，場面踴躍。而第三講尾聲更有問答環節，讓與會人士從《紅樓夢》主旨到英譯本用詞等多方面請教。三場講座均可在文學院臉書專頁 ([www.facebook.com/CUHKArts/](http://www.facebook.com/CUHKArts/)) 重溫。

**P**rof. Pai Hsien-yung delivered a series of three evening public lectures on the classic Chinese novel *The Dream of the Red Chamber* between 29 January and 2 February. These were the first lectures he delivered at CUHK as Distinguished Professor-at-Large.

The subject of the talks, *The Dream of the Red Chamber*—an epic late-18th century saga by Cao Xueqin, which has spawned its own academic discipline—attracted hundreds of students, alumni, staff members and members of the public. In his opening remarks at the first lecture, Pro-Vice-Chancellor Prof. Fok Tai-fai paid tribute to Professor Pai's boundless charisma and tireless effort to regenerate enthusiasm in Chinese culture.

Professor Pai, a novelist and a scholar on *Red Chamber* himself, shared his views on the novel's use of poetry, its two different major versions and the power of tragedy in its final portion in the three lectures.

In the first lecture, Professor Pai analysed the links between the plot of *Red Chamber* and the many poems and lyrics featured therein, explaining how the poetry often acts to foreshadow its storyline. He called the novel an 'epic elegy' at the peak of Chinese culture in Qianlong-era, and pointed out the many symbolisms in the book's characters, like the contrast between the protagonist Jia Baoyu and his father, Jia Zheng.

The second lecture was a discussion on the comparison between the two major versions of *Red Chamber*, as reflected through the character You Sanjie, whose brief



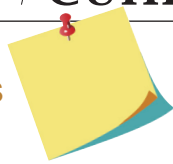
appearance and subsequent suicide in the middle section nevertheless rippled throughout the book. Professor Pai honed in on You Sanjie's vastly different portrayals in the Rouge and Cheng-Gao versions of the novel—she was depicted as a strong-willed woman in the latter, but a wanton in the former. He then further discussed the discrepancies between the texts: the Rouge version was based on a series of hand-copied manuscripts, while the Cheng-Gao version was printed in the 1790s, after Cao's death.

Professor Pai's final lecture focused on the power of tragedy in the final 40 chapters of *Red Chamber*, as exhibited by the red cape worn by Jia Baoyu as he becomes a monk in the final chapters, and the tear-stained handkerchief burnt by Lin Daiyu before her death. He explained that, given the Jia clan's fall from grace in the last third of the novel, the deviation in tone between the first 80 chapters and the final 40 could be accounted for artistically, and that the final 40 chapters were likely to have at least been drafted by Cao himself. Professor Pai concluded that even the finest details in the book are fraught with symbolisms.

Book signing sessions following the first two lectures attracted legions of eager fans of Professor Pai. He also answered questions on a variety of topics related to *Red Chamber* following the final lecture. All three lectures can be watched in full on the Facebook page of the Faculty of Arts ([www.facebook.com/CUHKArts/](http://www.facebook.com/CUHKArts/)). 📺







## 段崇智校長與學生茶聚

### Tea Gathering with the Vice-Chancellor



校長段崇智教授(右一)邀請近五十位學生組織代表出席1月22日的茶聚,與大學主管人員聆聽學生領袖對中大的意見,並交流想法。

段校長提到,中大是個大家庭,而學生是重要的家庭成員,其意見對於大學發展至關緊要。他期望,學生領袖能擔當學校與學生溝通的橋樑,繼續完善中大。

致辭後,段校長和一眾大學主管人員與學生領袖展開會談,當中包括學生會幹事、各書院學生會幹事、興趣學會代表以及各學院教務會代表,亦有內地生、研究生、國際生等代表。各學生領袖把握機會向段校長提問,就校園生活與學生活動(如學生組織場地及資源分配、財務運作方式)、中大未來發展(如學科教學語言、書院制發展)、校友聯繫及就業輔導政策等各抒己見。

段校長表示聆聽到學生的意見,並對他們積極發言的態度感到欣喜:「我相信透過互相尊重的討論,我們在各個議題的交流必可更進一步,從而締造更美好的中大校園、更美好的家。」

Vice-Chancellor Prof. Rocky S. Tuan (1st right) met close to 50 representatives of various student organizations in a tea gathering on 22 January. He and the senior management listened attentively to the student leaders and exchanged with them thoughts and ideas about the future of CUHK.

Professor Tuan emphasized the importance of student voices on University development, and hoped that student leaders could act as a bridge to facilitate better communication between students and the University so as to work for a brighter future for CUHK.

After delivering his speech, Professor Tuan and the senior management had direct conversations with the student leaders, including representatives of the Student Union of CUHK and the College Student Unions, representatives from various student clubs and associations, student representatives of the Senate as well as representatives of postgraduate and international students. During the gathering, student leaders actively gave the new Vice-Chancellor their views on a wide variety of issues, including campus life and student activities, development plan of CUHK, and the career support and alumni networking of CUHK.

Professor Tuan was pleased with the positive and active attitude of the student participants. 'I hope this gathering will be the beginning of an interactive process that will allow us to exchange views, and together we will continue to build a campus environment that is conducive to learning and growth.'

## 推廣校園關愛文化

### Caring Culture on Campus



學生事務處心理健康及輔導中心於2月1日舉辦精神健康推廣日,以「擁抱自己」為主題,象徵柔韌的蒲公英為吉祥物。副校長吳基培教授(中)在開幕辭中說:「要達至精神健康,首先要認識自己、接納自己。每個人與生俱來就有不同的特質。我們要接受自己的全部,不應拒絕或否認某些自認為差的方面,這樣才能根據不同環境,運用不同特質,活出有意義的生命。」他盼望,精神健康訊息像蒲公英種子一樣傳揚開去。

同場舉行的還有2017-18 uBuddies 學生朋輩輔導員交接儀式。新招募的學生輔導員承諾在未來一年加強朋輩間的相互支持與關懷。

活動吸引不少學生參與,或在台上表演音樂及魔術,或在台下主持遊戲和美食攤位。中心的學生輔導主任更於同日舉行心理健康講座,講解輔導的迷思。

The Wellness and Counselling Centre of the Office of Student Affairs organized the Mental Wellness Promotion Day on 1 February with 'Embrace Yourself' as the main theme and the resilient dandelion as the mascot. Pro-Vice-Chancellor Prof. Dennis Ng (centre) gave a speech at the opening ceremony. 'To achieve mental wellness, it's important to know and accept ourselves. Each person was born with different qualities. We need to embrace them as a whole instead of rejecting those that we consider weak or bad. When we are able to apply our different qualities to different life circumstances, we are making the most out of our lives.' He also expressed his hope that mental health messages could be spread like dandelion seeds.

Also celebrated on the same occasion was the handover ceremony for the 2017-18 uBuddies. The new student peer counsellors pledged to promote mutual support and care in student communities.

Students participated in the event by music and magic performance on stage and holding booths. A mental health talk on 'Facts about Counselling' was conducted by the Centre's Student Counsellor on the same day.

敬悼  
國學大師饒宗頤教授  
In Memory of  
Prof. Jao Tsung-I  
1917-2018







宣布事項 / ANNOUNCEMENTS



鐵一般的事實

Ironclad Proof

生物醫學學院聯同復旦大學組成的研究團隊發現，缺乏「胱硫醚合酶」（簡稱CBS）的實驗小鼠會出現類似「血色素沉着症」的徵狀，即有過量鐵質積聚於血清和肝臟，損害主要器官。研究人員指出，缺乏CBS可能干擾製造紅血球的機制，令過量鐵質積聚。是次發現有助為病因不明的「血色素沉着症」患者提供診治新方向。研究結果已在國際醫學期刊 *Hepatology* 發表。

A research team consisting of investigators from the School of Biomedical Sciences and Fudan University discovered that experimental mice with a deficiency in the enzyme 'cystathionine β-synthase' (CBS) displayed hemochromatosis-like symptoms, which means excess iron content in the serum and liver, along with damage to major organs. Researchers pointed out that CBS deficiency could interfere with the mechanism of red blood cell production and result in excessive iron retention. The study published in the international medical journal *Hepatology* may benefit patients suffering from hemochromatosis from unknown causes and provide new directions in diagnosis and treatment.

建築也要長智慧

Putting the Smart in Smart Buildings

未來城市研究所於1月24至26日舉辦裘槎資深科研院會議，主題為「智慧建築的技術、管理和霧計算」。為期三天的會議為研究人員、業內專家及學生提供講座，啟發思維，並就專線網絡、霧計算和智能計算法展開討論，探討其在智慧城市建築能源管理中的整合運用。

The Institute of Future Cities organized the Croucher Advanced Study Institute on 'Smart Building Technology, Management and Fog Computing' from 24 to 26 January. The three-day conference gave inspiring lectures to researchers, practising professionals and advanced students on the research frontiers of proprietary networks, fog computing and intelligent computational methods, and on exploring their holistic integration for energy management of buildings in smart cities.

板球新勢力

The Rise of CUHK Cricket

1月17日，中大首支學生板球隊正式成立，不同國籍的成員應邀參加由「香港快閃板球賽」冠軍隊「九龍廣東人」組織的校際比賽，對戰香港大學隊和香港科技大學隊。領隊 Deepen Nebhwani（前排左二）說：「中大隊表現出眾，兩場賽事均全力以赴。儘管最終落敗，但面對勁敵仍毫不遜色。」中大隊期待與「香港板球」合作，繼續推動大學板球發展。



On 17 January, a group of CUHK students from different nationalities formed the University's first-ever student cricket team and competed in an inter-varsity tournament organized by the Kowloon Cantons, last year's winner of the Hong Kong T20 Blitz competition, against the University of Hong Kong and the Hong Kong University of Science and Technology. Deepen Nebhwani (2nd left, front row), captain of the CUHK team, said, 'CUHK performed remarkably well, holding their own in both matches. Despite falling short in the games, we put heavy pressure on our formidable opponents.' The team looks forward to future fixtures with Cricket Hong Kong in a bid to further develop university cricket.

續任協理副校長

Reappointed Associate Vice-President

社會學系教授及入學及學生資助處處長王淑英教授再度獲委以兼任方式續任協理副校長，任期二年，由2月1日起生效。

Prof. Wong Suk-ying Veronica, professor in the Department of Sociology and Director of Admissions and Financial Aid, has been reappointed as Associate Vice-President on a concurrent basis for a further period of two years from 1 February.

續任學院院長

Reappointment of Faculty Deans

梁元生教授與汪正平教授分別再度獲委任為文學院院長和工程學院院長，任期六個月，由2月1日起生效。

Prof. Leung Yuen-sang and Prof. Wong Ching-ping have been reappointed respectively as Dean of the Faculty of Arts and Dean of the Faculty of Engineering for a further period of six months from 1 February.

2018暑期課程招生

Application for Summer Programmes 2018

「國際暑期課程」及「高中生暑期課程」現正接受網上報名。「國際暑期課程」將於6月24日至8月25日舉行，讓中大本科生、海外及本地其他大學本科生（包括在國外留學的香港學生）在中大的多元文化環境中一起學習，藉此推動學術及文化交流，擴闊學生的國際視野。「高中生暑期課程」將於7月11至27日舉行，旨在讓將於2019年升讀大學的本地及海外高中生於暑假期間修讀兩門由中大教員主講的短期課程，探索不同學科領域。

課程詳情可瀏覽 [www.summer.cuhk.edu.hk](http://www.summer.cuhk.edu.hk)。查詢請聯絡學術交流處（電話：3943 1826/3943 1827 或電郵：summer@cuhk.edu.hk）。

CUHK Summer Programmes are now open for online applications. The International Summer School, to be held from 24 June to 25 August, gathers CUHK undergraduate students, international students and Hong Kong residents studying at local and overseas universities to enjoy a fun, exciting and rewarding academic and cultural experience during the summer holidays. The Summer Institute, taking place from 11 to 27 July, will provide an opportunity for local and international secondary school students applying to universities in 2019 to explore different subject areas through two short courses taught by CUHK faculty members.

For more information, please visit [www.summer.cuhk.edu.hk](http://www.summer.cuhk.edu.hk). For enquiries, please contact the Office of Academic Links at 3943 1826/3943 1827 or at [summer@cuhk.edu.hk](mailto:summer@cuhk.edu.hk).

2017年度長期服務獎獲獎者名單

List of Long Service Award 2017 Awardees

在2017年度，大學共有二百七十六位僱員在長期服務獎計劃下獲獎，當中一百零二位獲得新設立的「十五年長期服務獎」，一百五十三位獲得「二十五年長期服務獎」，二十一位獲得「三十五年長期服務獎」。長期服務獎獲獎者名單已刊登在人事處網站（首頁▶Highlights▶2017年度長期服務獎獲獎者名單）（[www2.per.cuhk.edu.hk/zh-tw/staff-area/positive-workplace-and-staff-development-pwsd/list-of-long-service-award-2017-awardees](http://www2.per.cuhk.edu.hk/zh-tw/staff-area/positive-workplace-and-staff-development-pwsd/list-of-long-service-award-2017-awardees)）。

In the year 2017, a total of 276 staff members are eligible for the awards under the Long Service Award Scheme, including 102 awardees for the newly established '15-year Long Service Award', 153 awardees for the 25-year and 21 awardees for the 35-year Long Service Award. The list of long service awardees is posted on the Personnel Office's website (Home▶Highlights▶The List of Long Service Award 2017 Awardees) ([www2.per.cuhk.edu.hk/en-gb/staff-area/positive-workplace-and-staff-development-pwsd/list-of-long-service-award-2017-awardees](http://www2.per.cuhk.edu.hk/en-gb/staff-area/positive-workplace-and-staff-development-pwsd/list-of-long-service-award-2017-awardees)).

公積金計劃投資回報成績

Investment Returns of Staff Superannuation Scheme

基金 Fund	1.2018		1.2.2017-31.1.2018	
	未經審核數據 Unaudited	指標回報 Benchmark Return	未經審核數據 Unaudited	指標回報 Benchmark Return
增長 Growth	7.31%	6.37%	36.45%	32.06%
平衡 Balanced	4.85%	5.21%	26.05%	26.07%
穩定 Stable	2.66%	3.25%	14.77%	16.29%
香港股票 HK Equity	8.98%	9.31%	50.79%	46.83%
香港指數 HK Index-linked	10.00%	9.92%	45.40%	46.28%
A50中國指數 A50 China Tracker	13.10%	13.39%	52.90%	57.80%
港元銀行存款 HKD Bank Deposit	0.10%	0.03%	0.93%	0.21%
美元銀行存款 USD Bank Deposit*	0.22%	0.11%	2.41%	1.21%
澳元銀行存款 AUD Bank Deposit*	3.74%	3.63%	9.82%	8.38%
歐元銀行存款 EUR Bank Deposit*	3.79%	3.78%	16.09%	16.16%
人民幣銀行存款 RMB Bank Deposit*	3.81%	3.61%	14.46%	12.34%

強積金數據請參閱：[www.cuhk.edu.hk/bursary/chi/public/payroll\\_benefits/mpf.html](http://www.cuhk.edu.hk/bursary/chi/public/payroll_benefits/mpf.html)

For MPF Scheme performance, please refer to: [www.cuhk.edu.hk/bursary/eng/public/payroll\\_benefits/mpf.html](http://www.cuhk.edu.hk/bursary/eng/public/payroll_benefits/mpf.html)

\* 實際與指標回報已包括有關期間內之匯率變動

Both actual and benchmark returns include foreign currency exchange difference for the month





## 人機合體 BCI

今年是小說《科學怪人》面世二百年，這部小說講 Frankenstein 博士以化學及煉金術製造出科學怪人，自此西方流行想像中便不缺再造人、生化人、阿凡達之類的半人半物角色。

圖靈 (1912–1954) 在其論文〈計算機器與智能〉中，假設有機器可以模仿人語，與其他人類進行對話，討論焦點於是從人腦的黑盒轉移至可以觀察的輸入輸出，開啟了現代電腦科學的發展。

但不論電腦如何現代如何超級，都只可以模擬人腦的萬分之一。近年神經科學與電腦科技的長足發展，孕育了 BCI (Brain-Computer Interface) 的出現。

市場上有 BCI 產品 BrainGate，它把電極植入癱瘓病人的動感皮層（大腦負責控制人體動作的區域），探錄病人意圖支配手足時發出的腦神經訊號，再把訊號解碼轉化，以驅動輔助病人溝通或走動的裝置。

創新企業家馬斯克於 2016 年創立 Neuralink，研發供殘障人士使用的 BCI 產品，計劃在 2021 年推出市場，其後更會針對正常消費者市場。馬斯克希望做到的，是人類感官與人工智能合一，如可以直接在人類視覺系統之間傳送映像。

BCI 可說是大腦化學與電子學的完美結合，由內向的太太在內室發號施令，丈夫則在外頭作跑腿。發展前路當然充滿挑戰。單是在技術上要做出既安全又操作簡易的植入裝置已經不容易，而且倫理上也會令人想起科學怪人帶來的種種問題。

任何 BCI 的重大突破，都有賴多個科技領域的創見，如神經科學、工程學、物料科學、機械人研究、機器學習等，以上不少都已包括在《香港中文大學策略計劃 2016–2020》述及的跨學科優先研究主題內積極開展。

BCI 的發展，也印證了天體物理學家 Fred Hoyle (1915–2001) 的先見。他視進化為一個從化學走到電子學的過程。生物界的不動植物，靠化學原理生存；到了動物、高等動物，愈往上進化便愈需建立電子資訊網路來捕獵、覓偶、探索及理解身處的環境。

This year marks the bicentennial of Mary Shelley's (1797–1851) novel *Frankenstein* in which the scientist Victor Frankenstein creates a monster with chemical and alchemical means. The popular imagination in the West has never really ceased to spawn its androids, cyborgs and avatars.

In his famous essay, 'Computing Machinery and Intelligence', Alan Turing (1912–1954) rephrased the question: 'Can machines think?' by positing a machine which can imitate human responses to carry out a reasonable dialogue with human agents. Inquiry on inner thoughts was replaced by that on input and output, heralding the age of modern computing.

But the computer, no matter how modern or super, can only be a pale imitation of the human brain. Neuroscientific advancement and computer sophistication in recent decades have met in the exciting new field of Brain-Computer Interface (BCI).

BrainGate is one BCI device already in service. Electrodes are planted in the motor cortex (that part of the brain governing movement) of paralyzed patients to detect neuronal signals when a patient wants to move a hand or an arm. The signals are then decoded to enable a cursor or a limb to be moved.

Elon Musk, the mastermind behind PayPal, Tesla and SpaceX, founded Neuralink in 2016 to develop BCI devices for clinical use by the disabled by 2021, and for normal consumers at a later stage. Although no details are available yet, Mr. Musk seems to be envisioning the melding of human cognitive capability with AI to do things such as sending images from one person's retina straight to the visual cortex of another.

BCI can be viewed as the marriage of cerebral chemistry and electronics, of a wife in the inner chamber and an errand-happy husband on the outside. Its further development is of course fraught with challenges, such as the technical difficulty of having safe and user-friendly brain implants and the ethical ones that remind us of the 'hideous progeny' of Dr. Frankenstein.

Any major breakthrough in BCI would require ingenuity from many quarters—neuroscience, engineering, materials science, robotics, machine learning, etc. Many of these are strategically identified and vigorously pursued themes of research in the *CUHK Strategic Plan 2016–2020*.

BCI is another testimony to the foresight of the astrophysicist Fred Hoyle (1915–2001) who viewed the biological system as hierarchized from chemistry to electronics, with the immobile plants essentially chemical in character and the animals and the higher animals depending more and more on 'organized electronics' to hunt, mate, navigate and understand the universe.

T.C.



## 三磅的宇宙：大腦與認知研究所 The Three-Pound Universe: Brain and Mind Institute



大腦是人體最複雜難解，而又奧妙無窮的結構。它大約僅重三磅，卻包含一千億神經元和比全宇宙星系總和還要多的連結，是我們所思、所感、所為的指揮中心。有賴世世代代科學家的孜孜探索，我們逐漸了解大腦各區域相應控制的功能。這些知識對研究、治療腦疾病和認知障礙至關重要。中大的大腦與認知研究所正是這場科學探索的推動力之一，專注於揭示語言、認知、學習背後的腦神經奧秘。

研究所的標誌是個抽象化的大腦左側視圖。不規則的金黃碎片猶如一塊塊拼圖，比喻人類的大腦神秘莫測，藏着無限未知等待發掘。形狀各一的圖塊也象徵大腦不同區域分工合作。

「BMI」三個紫色粗體字母是中心的英文簡寫，橫越金黃板塊。標誌設計者李家健先生是語言學及現代語言系職員，據他說，字母 B 和 M 所處位置約莫是大腦的布洛卡區和韋尼克區，兩者都和人類的語言溝通密切相關。

十九世紀中葉，法國醫生布洛卡在研究言語障礙患者期間，發現大腦某區域專責協調說話所需的肌肉活動。十年後，德國科學家韋尼克發現另一關乎語義理解的大腦區域。該區受損的人說話符合文法，卻讓聽者不知所云。布洛卡和韋尼克都是發現大腦特定區域和語言關連的先驅。

一個半世紀以後的今天，大腦與認知研究所成員創造出一套機器學習演算法，能透過腦掃描，預測兒童未來的語言發展，甚至在發展障礙未現時及早偵測。這一研究成果對認知神經科學界意義非凡。人類對兩耳間三磅宇宙的窺探和認知又跨進一步。

The human brain is a puzzling, yet fascinating organ. At roughly three pounds, it contains about 100 billion neurons and more connections than the number of galaxies in the universe. It is the command centre of all we think, feel and do. As scientists continue mapping the brain, we are gaining more insight into which parts control the necessary functions. Such information is crucial to advancing research into brain diseases and cognitive disorders, and how to recover from them. The Brain and Mind Institute of CUHK is among the driving forces behind this progress with a vision to solve complex riddles concerning language, cognition, learning and their neural underpinnings.

The logo of the Institute is a stylized left side view of the human brain. The irregular golden segments bring to mind the puzzle pieces, reflecting the mystery and endless possibilities of the human brain. The different shapes of the pieces also symbolize the various parts of the brain with specialized functions.

The initials 'BMI' in bold, purple letters traverse the golden continent. According to Mr. Kinson Lee, designer of the logo and also an officer in the Department of Linguistics and Modern Languages, the positions of the letters B and M allude loosely to the brain's Broca's and Wernicke's areas which are considered vital for human communication.

In the middle of the 19th century, French physician Paul Broca examined patients with great difficulty in speaking, and discovered areas of the brain responsible for coordinating muscle movements needed for speech. Ten years later, a German scientist called Carl Wernicke discovered another area of the brain involved in speech comprehension. People with damage to this area speak grammatically but the words make little sense. Broca and Wernicke were among the first to identify specific areas of the brain concerned with language.

One and a half century on, in a recent study conducted by the Brain and Mind Institute, researchers created a machine learning algorithm that uses brain scans to predict future language development in children and to identify developmental disorders before they even surface. This has enormous implications in the realm of cognitive neuroscience, and is another big leap towards understanding and tapping the great mysteries of the three-pound universe we carry between our ears.

Christine N.



口談實錄 / VIVA VOCE

# 湯兆昇博士

## Dr. Tong Shiu-sing

- 物理系高級講師  
Senior Lecturer, Department of Physics
- 科學教育促進中心副主任  
Associate Director, Centre for Promoting Science Education

### 在大眾媒體講解科學令你人氣大增，可有對你的生活帶來甚麼變化？

除了朋友會笑言「昨晚在電視見到你呢」，走在街上也多了陌生人注目。乘搭公共交通會有人主動攀談，說他們的子女很喜歡看我做節目，要求合影留念。也經常收到中小學邀請擔任講座嘉賓或科學比賽評委，多了對外接觸的機會。

至於校內，有些學生會基於我在《學是學非》的活潑形象而選我的課。但我在鏡頭外是個要求頗高的老師，學生進入教室發現我一臉嚴肅，恐怕會覺得貨不對辦。

### 你曾獲物理教學獎、理學院模範教學獎和通識教育模範教學獎。能說說你的教學風格嗎？

我着重用簡單、直接的語言，務求令學生聽懂為止。特別在通識課堂教天文學，面對的大部分學生物理底子薄，用語更應淺白。這一點深受我博士論文指導老師楊綱凱教授啟發。面對任何層次的聽眾，他總能用最適切的語言，將高深理論解釋得簡單明瞭，是我課堂表現的楷模。

### 你的臉書專頁「湯博士的物理空間」有逾二萬四千個「讚」。在社交平台普及科學有甚麼心得？

不少教育工作者都會在社交平台做類似的科學推廣，但我的尺度比較寬鬆，沒甚麼老師包袱。例如之前有日本公司設計一款網格圖案T恤，利用視覺效果令身材顯得豐滿，我馬上聯想起愛因斯坦廣義相對論的時空扭曲示意圖，便在臉書加以闡釋，結果收穫不少讚好與回應。我也會攝製趣味短片，例如冒着給懸吊擺動的榴槤砸到臉上的危險，解釋能量守恆定律。趁着專頁多人看，我又乘勢推廣物理系的公開網上學習模組，令其網頁一週內錄得近二萬次點擊。我頗懂得把握時機說引人注意的話題，大抵是有點傳媒天分吧。

### 解釋物理現象要達至深入淺出，有甚麼訣竅？

解釋科學的過程常牽涉艱澀術語。例如為甚麼單車騎得愈快就愈穩當？解釋者往往一言以蔽之：因為角動量守恆。卻沒有考慮到提問者的感受——他們原本帶着一個問題而來，結果被告知有更多問題需要解答，就會倍感挫敗。而我則會在說完「角動量守恆」之後馬上補充，它指的是物體轉動時有慣性，如不受外力影響就一直轉下去。這個化繁為簡的講法也許會降低解釋的準確度，但為了令更多人親近科學也無可厚非。

### 由你擔任副主任的科學教育促進中心在推動香港科學、科技、工程及數學 (STEM) 教育方面有哪些舉措？

中心成員包括理學院不同學系的學者，主要服務對象是中學師生，不時就熱門科學話題舉辦科普講座。我們的「少年英才科學院」也定期推出各類科學課程，給有興趣的中學生選讀。去年暑假參與開辦首屆「STEM學堂」，免費讓一百多位中六學生率先修讀大學一年級程度的數學、物理、工程體驗課程，希望助他們找到心儀的主修科目，也為香港培養科學人才略盡綿力。

### 如果聽到有人說在香港唸物理太「離地」，你會怎樣回應？

現代社會許多重要技術的起點都源自基礎物理。例如物理學家發現磁場能令原子核有序排列，利用這一現象可獲取人體內水分子分布的信息，精確繪製人體內部結構，磁力共振掃描才得以面世。我們習以為常的手機、電腦、光纖聯網、全球定位系統，全賴物理學的進步。所以物理是現代文明的基石。當應用技術的發展到了瓶頸，也只有進一步探索基礎物理，人類文明才有再次飛躍的可能。

### You shot to fame promoting the science of physics in the mass media. How has it changed your life?

My friends will joke about seeing me on TV, and I occasionally caught strangers staring at me in the street. I would be chatted up by people sitting next to me on public transport who said their children loved my show and asked for a photo. I've also received more invitations from primary and secondary schools to give lectures or sit on the panel of science competitions.

While on campus, there are students who opted for my course based on my light-hearted persona in *Sidewalk Scientist*. But I am a demanding teacher off camera. I am afraid they might feel duped when seeing my poker face in class.

### You have been awarded the Physics Teaching Award, the Faculty Exemplary Teaching Award and the Exemplary Teaching Award in General Education. What do you think makes you an outstanding teacher?

I make a point of using simple, direct language to get my messages across. Especially when I teach astronomy in the general education class where most of my students are not physics majors, I must speak in a laymen-friendly way. I model it on my doctoral thesis advisor Prof. **Kenneth Young** who is able to communicate any difficult concept to any level of audience with ease and clarity.

### Your physics-themed Facebook page 'Dr. Tong's Sharing' has more than 24,000 followers. How did you make it?

Many educators are using social media to promote science, but I am especially unfettered by my teacher status. Some time ago, a Japanese fashion company designed a T-shirt that used an optical illusion grid to give the appearance of a bigger chest size. That brought to my mind the illustration of the time-space warp according to Einstein's general relativity theory, so I took the chance to expound on it on Facebook, and reaped tons of likes and comments. I've filmed fun videos for my page and once risked being smacked in the face by a durian to demonstrate the law of conservation of energy. I also capitalized on my page's popularity to boost the 'e-learning Micromodules for Introductory Physics' for my Department. The website turned out to log almost 20,000 visits in a single week. I guess I have a natural flair for saying the right thing at the right time to capture attention.

### What is your secret of explaining physics to the general public?

The process of explaining science often involves impenetrable jargons. For instance, why is it that the faster one pedals a bike the steadier it goes? One tends to throw the term 'conservation of angular momentum', and no more than that. Such answer may deter the inquirer who came with one question but are given more questions to bring home. When I have to say the term, I would add instantly that it means the inertia of a spinning object will keep it rolling in the absence of external forces. This approach may be blamed for dumbing down science, but is conducive to expanding the audience.

### You are an associate director at the Centre for Promoting Science Education. What has it done to drive STEM education in Hong Kong?

The Centre comprises scholars across disciplines of the Faculty of Science. Our main targets are secondary students and teachers, and we give them lectures on popular science from time to time. Our 'Science Academy for Young Talent' regularly rolls out courses for interested secondary students. Last summer, we co-organized the first 'CUHK STEM Course' to let more than a hundred Form-6 students have a taste of freshman-level mathematics, physics and engineering. It was hoped to help them find their preferred majors before applying for university, and to discover future scientists for the city.

### When you hear the claim that physics is a worthless degree in Hong Kong, how would you respond?

Many important technologies that have changed the way we live stem from fundamental physics. Take the discovery of magnetic field for example. Physicists found that when nuclei are placed in it they will line up. The phenomenon was later used to produce detailed images of the human body which comprises mostly water molecules. That's how MRI scan was born. What we consider necessities today like smartphones, computers, fibre-optic Internet and GPS would not be possible without advances in physics. I would say physics is a cornerstone of modern civilization. Moreover, when applied technology hits a plateau, it is only by further understanding basic physics that humankind would take a quantum leap again. 📺

