中大通訊
CUHK NEWSLETTER

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'Caltech and CERN contacted me and asked me to send interns again this summer.'

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「《為吏之道》和《為吏治官及黔首》應是秦一統天下前後訓練官吏用的讀本……」

'The Way of Being an Official and How to Be an Official for the Common People were texts employed by the Qin government to train officials ...'

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「最重要是有了解或探索問題的精神。」

'The most important quality is the will to explore or eagerness to delve into a problem ...'

四百期了！

《中大通訊》自1989年12月創刊，轉眼已迎來了第400期。從最初的黑白、十六開度、中英分版、每月出版一次，改為八開度、中英合版、半月出版一次，其後再以彩色印刷，版面設計和內容不斷革新，以滿足讀者需求。今後將繼往開來，精益求精，回饋大家的支持。

It is Issue No. 400!

The first issue of the CUHK Newsletter *was published in December 1989. And this, you're reading, is the 400th issue. Over the years, we have changed from black and white to colour, from A4 size to A3, from separate Chinese and English versions to combined, from once a month, to twice a month. What's more, the layout and contents have been continuously revised to keep up with the times and meet the needs of our readers. We have certainly come a long way. Thank you very much for being with us. With your continued support, we will strive to go even further.*

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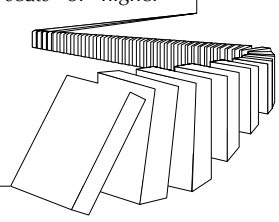
The *CUHK Newsletter* will take a break after this issue and resume publication on 19 August.

大 學 課 程 透 析
Anatomy of an Academic Programme

傳授知識、激盪思想、推動研究和創造知識，都是大學作為最高學府的核心使命。傳授知識更是使命的基本，而課程則是其載體。

The transmission of knowledge, the stimulation of thought, the promotion of research, and the creation of new knowledge are the core missions of universities as seats of higher learning. And, of all these mandates, the transmission of knowledge ranks as the most important, and the academic programme is its vehicle.



小飛俠學系——
判天地之美 析萬物之理

The Department of Peter Pans:
In Praise of the Beauty and Nature of Physics

「我覺得物理學家就像人類之中的小飛俠，永遠不會長大，並一直保持好奇心。」1944年諾貝爾物理學獎得主伊西多•艾薩克•拉比教授（1898–1988）這樣說。常懷赤子之心，渴望洞悉真理，是物理愛好者的共通點。「物理是在最基本的層次上探究自然規律，學的時候有一種滿足感，很興奮。物理的內在規律很美妙，很引人入勝。」中大物理系系主任**夏克青**教授解釋說。

物理學涵蓋基本粒子到宇宙，範圍浩瀚如此，何處才有穩當的入門之路？夏教授說：「中大的物理課程在本港可以說是最全面的，為中學師生及社會各界所公認。在課程設計上，我們一直留意各方意見，不斷調適，希望學生在嚴格的訓練中可以較容易掌握。」

夏克青教授
Prof. Xia Keqing

一理通百理明

探索萬物的秩序及機理，能夠拓闊眼界和人生觀。「年輕人如果有喜歡物理的熱情，應該一試。物理系畢業生無論在分析、解決問題、運用數據和數學等方面的能力，都會非常強。如果連很抽象的物理概念都能夠了解，以後面對具體問題，相對來說會較容易應付，適應性更強。」夏教授以過來人的身分說。

有志向學，還需明師。這方面，中大物理系的教師各勝擅長，研究領域包括理論物理、量子信息、量子光學、納米材料、湍流及軟物質物理、強關聯電子系統、超冷原子和分子、天文物理和中微子物理等，為學生提供學習物理前沿不同範疇的機會。

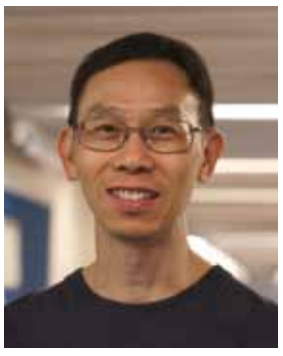
課程設計富有心思

因應3+3+4學制的推行，2012年是「雙班年」，第一屆四年制和最後一屆三年制學生同時入學。物理系將開辦不同程度的科目，配合學生在不同水平上起步。負責課程設計及檢討的**許伯銘**教授說：「原本的三年制課程本已相當不錯，借助2009年的『課程評核』，系方對其美中不足之處有更深入的理解，在這基礎上，四年制課程將利用五十必修學分，均衡地提供物理知識、數理方法、實驗方法、專業和通用技能，研究經驗和態度等各層面的培訓。」

許教授指出，四年制課程的彈性會較大，不想把學生困得太緊。在選修的二十一學分部分，有志深造的可加入「物理精研組」，善用選修科為學術研究打好根基。不入精研組的，可以從一系列包括物理進階及高階科目，以及物理各研究範疇的入門科目之中，自由選擇。系方也容許跨學系選修，以利學生擴闊知識面，為就業和未來發展做好準備。

物理系學風自由，重視學生的意見，在學期內如果發覺某些環節可以更好，系方會盡快完成微調。學系也會舉辦諮詢會，以及追蹤於海外升學畢業生的去向，收集執教鞭的校友等資料，編成數據庫，建立的網絡有助學系持續改善質素，難怪物理課程成為少數被校方評為卓越的課程之一。

如魚得水教學相長



朱明中教授
Prof. Chu Ming-chung

過去幾年，物理系收生情況十分理想。2011年，物理系取錄了六十四位本科生，大部分在高考的物理及數學科目都有優良成績。「物理系學生有一個特點，是絕大部分對物理都很有熱誠，他們愛思考，不隨眾，在中學時也許被視為另類，但來到中大，這一群傻裏傻氣的孩子就很開心。」主管系內學生事務的**朱明中**教授說。除了勤奮，到海外參加短期研究計劃的學生表現也很出色。「他們認真學習，表現很好。連加州理工大學和歐洲核子研究中心都主動問我，今年可不可以繼續派學生去。這個不簡單！」朱教授欣慰地說。截至2011年底，歷來參與海外研究實習的九十二名學生，有六十七位繼續深造，當中四十七位獲著名大學取錄為博士生。

朱教授續道：「以前我覺得研究是艱深的，只有成績最好的學生才跟得上，但大亞灣中微子實驗令我改變想法。龐大的計劃有許多細節要兼顧，有時要懂得一些古靈精怪的方法。記得有一次，一位負責實驗的柏克萊教授過港，急想知道某具儀器在搬運時能承受多少震動。我臨時召回兩名學生，各製作了一套測試裝置，都行得通，我覺得好棒！學生各有長處，應多些鼓勵他們發揮。」

通才教育終身受用

物理系畢業生每年約有一半繼續深造，就業的包括投身教育、私人機構、政府及公營機構等。鑑於物理學課程並非針對某一行業的職前訓練，而是着重提升學生分析及解決問題的能力和對自我能力的理解，因此，畢業生順其志趣，涉足不同行業，發揮所長，也是自然的。

畢業生的人生路各有不同，但都很念舊，很關心母系和後輩的情況。物理系系友經常舉辦各種活動及講座，讓本科生不單認清自己的前路，還可掌握現今社會對大學畢業生各種能力的要求。每年，系友會還會授予學弟學妹獎學金，以表揚他們服務社群的精神。

'I think physicists are the Peter Pans of the human race. They never grow up and they keep their curiosity,' said Prof. Isidor Isaac Rabi (1898–1988), Nobel laureate in physics 1944. Physics lovers do share one thing—they are pure at heart and have a thirst to find out the meaning of the physical world. 'Physics is a natural science conducted at the most fundamental level in order to understand how the universe behaves. Getting to know it gives us a sense of fulfilment and excitement. The inherent pattern of the law of physics is wonderful and fascinating,' explained Prof. **Xia Keqing**, chairman of the Department of Physics, CUHK.

The scope of physics is so vast that it involves study of the tiniest elementary particles to the universe. So is there a secure path that would lead us to physics? Professor Xia said, 'The physics programme of the Chinese University is the most comprehensive in Hong Kong. This is well-known among secondary school students, their teachers, as well as members of the public. We continue to gather feedback and adjust the curriculum. The training here is tough, but academics will try every means to make it easier for students to follow.'

Train the Mind and Not Just the Hands

The exploration of nature and how it works can broaden one's horizon and have an impact on his/her attitude towards life. 'If young people have a strong passion to study physics, go ahead! Physics graduates are highly analytical, excellent in problem-solving, data management and mathematical skills. If they can understand abstract concepts in physics, practical problems in the material world won't intimidate. They're adaptable and can handle any task at ease,' Professor Xia commented.

Students who want to major in physics will find the University the right place for them. Many professors are involved in cutting-edge research on a wide range of subjects, e.g., theoretical physics, quantum information, quantum optics, nano-materials, turbulence and soft matter physics, strongly-correlated electron systems, ultra-cold atoms and molecules, astrophysics, and neutrino physics, etc., which give students numerous learning opportunities.

The Curriculum—Striving Towards Perfection

In the double cohort year beginning September 2012, the first students of the four-year programme and the last students of the three-year programme will enter university together, and the new 3+3+4 curriculum will be implemented. In view of that, the department is going to offer physics courses of different levels to gear to the needs of individual students. Prof. **Hui Pak-ming**, who is responsible for curriculum design and reform, said, 'The existing three-year programme is good. In 2009, after the programme review, the department had a better understanding of its minor flaws, and decided to use the 50 compulsory units in the new programme to provide balanced training in physics, mathematical and experimental methods, professional and generic skills, research experience, and cultivation of professional attitude.'

許伯銘教授
Prof. Hui Pak-ming

Professor Hui said students will enjoy more flexibility in the four-year programme. For those who want to pursue further studies in science, they can join the enrichment stream in theoretical physics and make use of the 21 elective units to enroll in preparatory courses. For those who have other plans, they are free to choose from a large number of intermediate and higher physics courses, and elementary research modules related to the many aspects of physics. Apart from that, students can opt to take courses offered by other departments as their major electives. This can help to broaden students' knowledge base and match with their career goals.

The department's liberal atmosphere encourages teacher-student interactions. If students believe that there is room for improvement in certain areas, adjustments can be carried out, if possible, by the teachers without delay. The data collection and management mechanisms are well-established in the department and this was done through the organization of a number of consultation sessions, tracking of graduates who furthered their studies overseas, and the updating of alumni profiles who currently teach in local secondary schools. These data are useful for networking which contributes to the continuous quality improvement. So, it is not surprising that the physics programme is among the few programmes which received endorsement as 'excellent' by the University.

Fruitful Teacher-student Relationships

In the past few years, the department admitted many outstanding students. In 2011, there were 64 new undergraduates, most of whom received distinction or credit in physics and mathematics in the public examination. Prof. **Chu Ming-chung**, who is in charge of student affairs, said, 'CUHK physics students are characterized by a feverish passion, the capacity to think independently, and an intrepidity to go against the grain. They were often the odd men out in secondary school. When they met each other at CUHK, they were extremely happy.' Physics students have a reputation for being hardworking and dedicated, and these qualities are appreciated by many professors in famous institutions. 'Caltech and CERN ("Conseil Européen pour la Recherche Nucléaire", or in English "European Organization for Nuclear Research") contacted me and asked me to send interns again this summer. This is extraordinary!' exclaimed Professor Chu. By the end of 2011, 92 students had completed overseas internship training, 67 chose to take up further studies, and 47 were admitted to world-renowned universities to continue PhD studies.

'I used to think research work is difficult and only the top students can handle it. But after the Daya Bay reactor neutrino experiment, I've dropped that view. The project was gigantic and the team needed to take care of a lot of things. Occasionally, we must invent some strange methods to solve a problem. I remembered once that a Berkeley professor who was in charge of the project urgently wanted to know how much stress a certain piece of equipment could bear during transportation. I asked two students to come back to the laboratory. They designed and fabricated two sets of testing apparatus separately, and both of them worked very well. This is fantastic! Every student has his/her strength. As a teacher, we should encourage them to do more,' Professor Chu said.

Lifelong Education

In recent years, about 50% of graduates pursue further studies, while others would take up positions in education, private businesses, the government and public organizations. The aims of studying physics are to train our analytical mind, improve problem-solving skills and deepen our understanding towards ourselves. Since it does not belong to any kind of pre-vocational training, it is natural that graduates have diversified career paths, which contribute to the benefit of society in different positions.

In the eyes of alumni, what matters most is not job titles, but affection towards the physics department and the students studying there. The CUHK Physics Alumni Association has been a staunch supporter in sustaining the growth of the department, and through the organization of communal activities and career talks, current students can cultivate a better understanding of their life's goals and what to expect in future careers. The association would also award scholarships to those students who dedicate themselves to serving the community.

小飛俠當中的表表者，物理學家理查德•費曼教授（1918–1988）常說：「我甚麼也不知道。」有人問他：「你甚麼也不知道，怎麼做人？」教授會反問：「我不懂他們的意思。我總是一無所知地過活，這個容易。我倒想知道，你怎麼能知道。」問得好！為甚麼有天與地？為甚麼世界這樣美？為甚麼我在這個時空出現？這是除了科學家之外，人人都在探求，並且想知道的奧秘。

Prof. Richard P. Feynman (1918–1988), an icon of the Peter Pans, always says, 'I don't know anything.' Some people ask him, 'How can you live without knowing?' His reply is, 'I do not know what they mean. I always live without knowing. That is easy. How you get to know is what I want to know.' What a question! Why are there sky and earth? Why is nature so beautiful? How come I was born in this space and time? Not only scientists but each of us will ask these questions, and want to know the answer.

二千二百年前的公務員手冊

秦代簡牘

Civil Servants' Manual from 2,200 Years Ago

Bamboo Slips of the Qin Dynasty

公務員操守向來為廣大市民所關注，公務員守則的內容和應用範圍須時加檢討，也是不爭的事實。今之公僕，古曰官吏，原來公元前三世紀的秦代已清楚列出做官為吏必須注意的事項，細讀之下，當發現二千多年來反反覆覆，不離幾項大原則。

It's an accepted fact that the civil servants' code of conduct is something that requires regular review. But in fact this is nothing new. As early as the Qin Dynasty (221–206 BC), the principles governing civil servants' behaviour and performance had already been clearly listed out. Reading them, one discovers that some of the themes we deem important have not been changed for over 2,200 years.

「嶽麓書院秦簡」，內載《為吏治官及黔首》的一份簡冊，列出官吏之「五善」和「五過」。做官要有五種操守：「吏有五善：一曰忠信敬上」，即忠信和尊敬上司；「二曰精廉無旁（謗）」，清廉和不誹謗別人；「三曰舉吏審當」，處事要恰當；「四曰喜為善行」，多行善；「五曰龔（恭）敬多讓」，恭敬和謙讓。從反面着墨，則做官不可犯的過失有五：「吏有五過：一曰視黔首（百姓）渠驁」，即對百姓倨傲；「二曰不安其朝」，沒有做好自己的工作；「三曰居官善取」，指以權謀私；「四曰受令不偈」，不迅速執行命令；「五曰安其家忘官府」，只顧自己的家庭而忽略公務。

為官之道，異本同源

歷史系**黎明釗**教授指出，《為吏治官及黔首》無論在內容、格式、主要法治觀念，和1975年出土的「湖北睡虎地秦簡」所載的《為吏之道》有頗多相近之處，可說同出一源。《為吏治官及黔首》的文字寫在八十七枚竹簡上，共有一千二百零一字，而寫在五十一枚竹簡上的《為吏之道》合計一千一百二十四字。「《為吏治官及黔首》的內容比較豐富，除了『為吏』外，還有治理百官和黔首的原則。兩者有幾處的文字差不多完全相同，最明顯的是『吏有五善』、『吏有五過』跟『吏有五則』、『吏有五失』，以及為吏必須廉潔正直、謹慎堅固、納諫恤民等的一大段。」黎教授專研秦漢及魏晉南北朝社會史，去年曾在甘肅省第二屆簡牘學國際學術研討會發表〈興利除害——嶽麓書院秦簡《為吏治官及黔首》讀記〉一文。

黎教授推斷，《為吏之道》和《為吏治官及黔首》應是秦一統天下前後訓練官吏用的讀本，類似公務員手冊，估計是據官方的教學文本抄錄而來。文字雖有出入，但相同之處仍脈絡分明，因為底本應同是來自官府，縱有差異，亦可能只是傳抄時使用異體、通假字，或釋讀所致。「兩者相異的地方有幾個可能性，」黎教授解釋：「例如分屬官府文本的不同部分，或者是官吏自己的補充、詮釋或心得，也可能是區域不同，面對的政治和社會民生問題不一樣，各地吏師使用的舉例或講述重點便有參差。」

以法為尊

《為吏之道》和《為吏治官及黔首》都提及為吏必須「興利除害」，同樣警告地方官吏依法辦事，不可擅興徭役、留難百姓和賦斂無度，且務必嚴守律令，但後者所列的職事內容卻詳細得多。黎教授推測，這可能是為師之吏據官府文本的綱領，申述具體工作，引例為輔，以說明「興利除害」的核心事項，但因地區和時期不同，具體實務也不一樣，所以內容較為龐雜。

黎教授指出，很難判斷《為吏之道》和《為吏治官及黔首》兩者在時代上孰先孰後，惟其相類相通之處令學術界雀躍不已，視之為研究秦代律例的重要材料。兩者都糅合了大量先秦諸子的學說，其中以法家思想至為明顯。秦制重法，不容官吏犯事，對官吏的訓練亦強調個人道德操守。大體《為吏治官及黔首》所說「審用律令，興利除害」是對良吏的嚴格要求，也與他們的陞遷有莫大關係。

其實，官吏如果能依循這些讀本做好自己的工作，自然人民安居樂業，社會和諧，大概沒有甚麼人會不滿他們陞官。

「嶽麓書院秦簡」是湖南大學嶽麓書院購藏的秦代竹簡，據說原有兩批，出土後流到香港，第一批有完整簡片一千三百餘枚，於2007年由嶽麓書院搶救性購藏，第二批七十六枚於次年由一位香港收藏家捐贈。在學術界，一般按照發現地點來命名文物，如「里耶秦簡」、「郭店楚簡」。但是由於這批輾轉流徙的秦簡發現地點已無從考證，遂以最後的收藏地命名。「湖北睡虎地秦簡」又名「雲夢秦簡」，1975年12月於中國湖北省雲夢縣城關睡虎地十一號墓出土。

The *Bamboo Slips of the Qin Dynasty Kept in the Yuelu Academy* in Hunan University had originally comprised two batches. After being unearthed, they had ended up in Hong Kong. The first batch about 1,300 slips were acquired by Yuelu Academy in 2007. The second batch of 76 was donated by a collector in Hong Kong in the following year.

The *Bamboo Slips of the Qin Dynasty Kept in the Yuelu Academy* contains the text, *How to Be an Official for the Common People*, which lists the 'five rights' and 'five wrongs'. The 'five rights' an official should abide by are: 'Be loyal and respectful to his superior; be upright and do not slander; handle matters appropriately; engage in acts of benevolence; and be respectful and humble.' On the other hand, there are 'five wrongs' an official should avoid. 'Do not be arrogant to the people; do not fail to do your work properly; do not abuse your power for personal gain; do not delay carrying out orders; do not care for your family at the expense of your public duties.'

Officialdom—Same Roots, Different Manifestations

Associate professor at the Department of History, **Lai Ming-chiu**, pointed out that *How to Be an Official for the Common People* has so much in common, whether in terms of content, format, and the main concepts of law and order, with *The Way of Being an Official*, written on the bamboo slips unearthed from Shuihudi in Hubei, that they were likely to have come from the same source. *How to Be an Official for the Common People* was scribed on 87 slips of bamboo and had a total of 1,201 words. *The Way of Being an Official*, written on 51 slips of bamboo, had 1,124 words. *How to Be an Official for the Common People* was richer in content. Besides instructions on how to be an official, it also taught the ways of administration and of ruling the people. There were parts that were almost identical, the most obvious being the 'five rights', 'five wrongs'; and the 'five principles', 'five mistakes'. Professor Lai specializes in the social history of the Qin, the Han, the Wei, the Jin, the South-North Dynasties. Last year he published a paper on the said bamboo slips at the Second International Seminar on the Science of Inscribed Bamboo Slips held in Gansu Province.

Professor Lai inferred that *The Way of Being an Official* and *How to Be an Official for the Common People* were texts employed by the Qin government to train officials around the time of the unificaiton of China. It was a civil servants' manual of sorts that was estimated to have been copied from official teaching texts. There were discrepancies in the wording, but the similarities were convincing. The originals should have come from the government bureau and any discrepancies were probably due to the use of variant forms of characters or phonetically related characters during the process of copying, or issues of interpretation. 'There can be several possibilities for the discrepancies,' Professor Lai explained. 'The texts could have come from different parts of the original, or from the officials' own supplementary comments, footnotes or sharing of experience. They could have been derived from different geographical areas which had different political, social and livelihood realities. There are variations among the examples used or the narrative focus of the officials of different areas.'

The Law Reigns Supreme

Both *The Way of Being an Official* and *How to Be an Official for the Common People* mentioned that civil servants should 'promote good and remove harm'. Both urged local officials to act according to the law and to comply strictly with orders, and cautioned against taking the law into their own hands, giving the people an unnecessarily hard time or levying heavy taxes.

He pointed out that while it was hard to tell which book had come first, their similarities and commonalities were very exciting to scholars who regarded them as important materials for the study of the laws and regulations of the Qin Dynasty. Both integrated much pre-Qin philosophy, in particular, the thoughts of the Legalists. The Qin political system which stressed legality did not leave any margin for wrongdoing and its training of civil servants emphasized a personal code of conduct. The mention of 'judicious use of statutes, promote good and remove harm' in *How to Be an Official for the Common People* is both a strict requirement for civil servants and a determinant of their prospects for promotion.

If civil servants would comply with these texts and do their jobs well, people would live in peace and work in contentment, and harmony would reign. And there should be no objection to their rise to officialdom.

黎明釗教授先後於1982年及1985年取得香港中文大學文學士及哲學碩士學位，1995年畢業於加拿大多倫多大學，獲哲學博士學位。黎教授的研究主要集中在秦漢時代的簡牘文書，秦漢及魏晉南北朝的政治和社會史。

黎教授出版了頗多關於漢帝國控制社會的論文，最近完成了《輻輳與秩序：漢帝國地方社會研究》的書稿，此書探索漢帝國與百姓的互動關係，討論中央政府如何控制幅員廣大的帝國，將由中大出版社出版。

Prof. Lai Ming-chiu received his BA and MPhil degrees from The Chinese University of Hong Kong in 1982 and 1985, respectively. He furthered his studies in Canada and graduated with a PhD degree in 1995 from the University of Toronto. Professor Lai's research mainly focuses on bamboo slips and wooden documents of the Qin-Han periods. He is also interested in the political and social history of the Qin-Han and Wei-Jin Dynasties.

Professor Lai published a number of articles on issues related to social control of Han China. Currently, he finished a book manuscript, titled *Power Convergence and Social Order: The Study of Local Society of the Han Empire*. (Hong Kong: The Chinese University Press, forthcoming). This work explores the interaction between the Han Empire and its civilians. It also discusses the central government's implementation of imperial control across the empire.

《仿唐鎮墓獸》

陶瓷　9cm x 10cm x 21 cm

趙惠盈，藝術系

Replicate of Tang Tomb Guardian

ceramic　9cm x 10cm x 21 cm

Chiu Wai-ying Khaki,
Department of Fine Arts

粗顆粒污染物影響健康

Coarse Particulate Pollutants Affect Health

香港空氣質素近年持續下降，對市民健康的損害亦日趨嚴重。學術界以往普遍認為，空氣污染物中會危害呼吸系統的可吸入性顆粒物，以微細顆粒（$PM_{2.5}$，即空氣動力學直徑小於2.5微米，本港稱「微細懸浮粒子」）為主，以其較容易進入呼吸道深處和肺泡，引起呼吸系統病變。中大賽馬會公共衞生及基層醫療學院職業和環境健康學部余德新教授（左）領導的研究團隊和博士研究生邱宏女士（右）進行了一項流行病學研究，探討2000至05年間香港的急症入院情況，發現除了微細顆粒，粗顆粒（PM_{10}，即空氣動力學直徑介於2.5和10微米之間，本港稱「可吸入顆粒物」或「可吸入懸浮粒子」）對呼吸系統健康的危害同樣不容忽視。

研究發現，經校正微細顆粒和其他氣態污染物的影響後，粗顆粒污染物的濃度每增加 10 μg/m³（微克/立方米空氣），呼吸系統疾病的急症入院率便會增加1%，慢性阻塞性肺部疾病的急症入院率亦上升1.6%。換言之，粗顆粒污染物的濃度每增加10 μg/m³，因呼吸系統疾病而急症入院人數便會每年增加八百三十人，同時，因慢性阻塞性肺部疾病急症入院的人數亦每年多出四百八十二人。

中大最新發布的研究「粗顆粒污染物對呼吸系統健康的危害」，是目前為止在單一城市進行的最大型研究，涵蓋超過五十萬名六年內因呼吸系統急症入院的病人。研究結果已刊載於權威國際學術期刊《環境與健康展望》。中大並建議特區政府環境保護署將來制訂空氣質素指標時應考慮PM_{10}的危害作用。

In Hong Kong, air quality has been deteriorating over the years and presents a serious threat to the health of its citizens. It is commonly accepted that the associations between the respirable suspended particles and adverse respiratory health effects are mainly attributable to the fine particles ($PM_{2.5}$, particles with an aerodynamic diameter of less than 2.5 μm), because of their higher number (count) concentration, larger surface area and deeper lung deposition. An epidemiological research led by Prof. Yu Tak-sun Ignatius (*left*), head, and Ms. Qiu Hong (*right*) (PhD candidate) of the Division of Occupational and Environmental Health, the Jockey Club School of Public Health and Primary Care at CUHK, examined emergency hospital admissions in Hong Kong between 2000 and 2005 and reported that the effects of coarse particles (PM_{10}, particles with an aerodynamic diameter between 2.5 and 10 μm), should not be ignored.

CUHK's research discovered that a 10 μg/m³ (micrograms per cubic metre of air) increase of coarse particles was associated with about 1% increase of emergency hospital admissions for total respiratory diseases and 1.6% increase for chronic obstructive pulmonary diseases (COPD). In other words, a 10 μg/m³ increase of coarse particles led to 830 additional emergency hospital admissions for respiratory diseases per year, of which 482 admissions were due to COPD during the study period.

This study is the largest single-city study to date on the effects of coarse particles on emergency hospital admissions for respiratory diseases, involving over half a million admissions over the six-year period. The report was recently published in *Environmental Health Perspectives*, the top international journal in environmental health. CUHK also suggests the Environmental Protection Department of the HKSAR Government to take into consideration the adverse effects of PM_{10} when reviewing Air Quality Objectives in future.

改良肥胖者無創肝纖維化檢查

Enhancing Assessment of Liver Fibrosis in Obese Patients

中大與法國波爾多大學最近進行了一項合作研究，率先引入加大碼探頭為肥胖病人進行肝纖維化檢查，證實能有效深入肥胖人士的皮下脂肪層，準確量度其肝纖維化的程度。

肥胖容易引致肝臟疾病，八成肥胖人士同時患有脂肪肝，嚴重者可能演變成肝纖維化及肝癌。透過評估患者的肝纖維化程度，醫護人員可以及早預斷和提供合適治療。

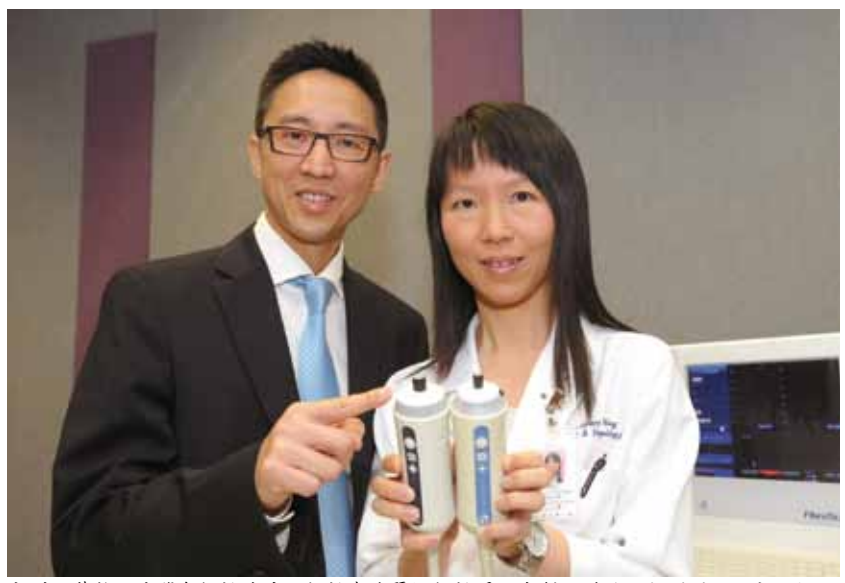
肝穿刺是現時評估肝纖維化程度的黃金標準，但具創傷性。近年，肝纖維掃瞄器已發展為量度肝纖維化和肝硬化程度最準確而無創傷的檢查方法。掃瞄器藉着切變波的原理去量度肝臟的軟硬程度，然而，由於肥胖人士的皮下脂肪層較厚，約三分一患者在檢查時不能顯示實際數據。有見及此，專為肥胖人士檢測肝臟軟硬程度的加大碼探頭便應運而生。

中大與波爾多大學於2009至2011年進行一項突破性研究，利用原有的正常探頭及新引進的加大碼探頭為二百八十六名病人量度。結果發現，使用加大碼探頭成功為98%的病人取得可靠數據，使用正常探頭時的可靠數據則減至92%。身高質量指數高於 30 kg/m²的肥胖患者，如使用正常探頭量度肝纖維化程度，只有74%患者能取得可靠數據，但當轉用加大碼探頭，數據準確度則提升至94%。

The Chinese University and the University of Bordeaux in France have recently conducted a collaborative research to pioneer the use of the new XL probe to assess liver fibrosis among obese subjects with a deeper penetrance of measurement, and which can also enhance the performance of Fibroscan.

Obesity is closely associated with liver diseases and up to 80% of obese people may have fatty liver, which may lead to cirrhosis and liver cancer. By assessing the severity of liver fibrosis, medical professionals can predict the prognosis of patients and give proper treatment.

Liver biopsy is a traditional standard test to assess liver fibrosis but it is an invasive procedure. Over the last few years, liver stiffness measurement by Fibroscan, an accurate, reproducible and non-invasive test using Doppler ultrasound technique, has been developed to detect liver fibrosis and cirrhosis. But Fibroscan fails to give reliable results in about 30% of obese patients due to their thick subcutaneous fat layer. In view of this, a new XL probe was developed for liver stiffness measurement in obese patients.



內科及藥物治療學系教授陳力元教授與黃麗虹教授展示無創肝纖維化掃瞄器的加大碼探頭（左）和正常探頭（右）

Prof. Chan Lik-yuen Henry and Prof. Wong Lai-hung Grace of the Department of Medicine and Therapeutics show the new XL probe (left) and the regular M probe (right) of Fibroscan

From 2009 to 2011, CUHK and the University of Bordeaux conducted a research on liver stiffness measurements on 286 patients by both the new XL probe and the original M probe. Valid measurements were obtained in 98% of patients using the XL probe, compared to 92% when the M probe was in use. Among obese patients with a body mass index above 30 kg/m², 94% valid measurements were obtained by the XL probe and 74% by the M probe.

支持中大精英運動員

Supporting CUHK Elite Athletes

大學獲運動燃希望基金慨捐一百三十萬港元，設立「運動燃希望基金——中大精英運動員計劃」，為有運動天賦而缺乏財政支援的中大精英運動員設立獎學金，資助中大運動隊伍訓練，以及培訓運動領袖，如提升其自信心、責任感、溝通技巧等。

捐贈儀式於6月4日舉行，基金創辦人及主席利蘊珍女士（右）把支票送交副校長黃乃正教授。利蘊珍女士自小熱愛運動，她表示「運動對大學生的全面發展非常重要，希望通過計劃提供經濟援助予有需要的運動員參與各項培訓，提升水平。」

The Sports for Hope Foundation (SFHF) generously donated HK$1.3 million to the Chinese University to launch the 'Sports for Hope Foundation–CUHK Elite Athletes Scheme'. The goal of the scheme is to support needy athletes in CUHK by establishing scholarships, sponsoring the training of sports teams, and strengthening leadership skills of captains in terms of confidence, sense of responsibility and communication skills.

Ms. Marie-Christine Lee (*right*), founder and chairman of SFHF, and Prof. Henry N.C. Wong, CUHK Pro-Vice-Chancellor, attended the donation presentation ceremony on 4 June. Ms. Lee loved sports when she was small. She said, 'Sports is vital to the all-round development of undergraduate students. The scheme is to help needy athletes to enhance their training, so they can raise their standard.'

宣 布 事 項

ANNOUNCEMENTS

舊電話號碼字首失效
Dropping Phone Number Prefixes

由2012年7月1日起，以'2609'、'2696'及'3163'為字首的電話號碼將告失效，致電該等號碼者，將聽到一段關於新電話字首'3943'現已生效的錄音，致電者需重新撥號。有關新電話系統的最新消息，請瀏覽*www.cuhk.edu.hk/ip-phone/*。

From 1 July 2012, the old telephone number prefixes, i.e., '2609', '2696' and '3163' will be dropped. People dialling these prefixes will hear a recorded message indicating that the telephone number prefix of CUHK has been changed to '3943'. Callers will need to redial using the new prefix. Please visit *www.cuhk.edu.hk/ip-phone/* for the latest on the new phone number system.

逾夜泊車新安排
New Arrangements for Overnight Parking

由2012年8月1日起，方樹泉樓對面停車場只供全職職員使用（即持'A'、'AR'及'Am'證者），但不可逾夜停泊。符合大學政策而獲批准逾夜停泊之職員，均只限停泊於上海總會科研技術中心及澤祥街之Site B車場。

With effect from 1 August 2012, the car park opposite Fong Shu Chuen Building will only be open to full-time staff users (i.e., those holding 'A', 'AR' and 'Am' labels) and no overnight parking will be allowed. Staff overnight parking, if approved in accordance with the University policy, will be confined to the Shanghai Fraternity Association Research Services Centre and Site B at Chak Cheung Street.

大學刊物電子書添搜索功能
Search Function for University e-Publications

大學刊物的網上版已增添搜索功能，用者只需輸入關鍵詞，即可找到相關文章，方便易用，網址為*www.iso.cuhk.edu.hk/chinese/publications/*。

A search function has been added to various online university publications. Users can easily find articles in those publications simply by inputting key words. Please visit *www.iso.cuhk.edu.hk/english/publications/*.

網上教職員名錄更詳盡
Online Staff List Enhanced

香港中文大學網上教職員名錄自2012年6月起增列乙及丙類服務條例職員，並於每年10、2及6月更新，查看請到*www.cuhk.edu.hk/iso/stafflist/*。

From June 2012, the Chinese University Online Staff List includes Terms of Service (B) and (C) staff. The list will also be updated in October, February and June each year. To view the list, please visit *www.cuhk.edu.hk/iso/stafflist/*.

穿梭小巴調整收費
Adjustment of Shuttle Light Bus Fare

穿梭小巴收費將於2012年7月3日調整，每人每程收費五元，乘車券每本十張，每本收費四十五元。

The fare of the shuttle light bus will be adjusted with effect from 3 July 2012. The new fare is HK$5 per person/ride and bus coupons in booklets of 10 is HK$45.

Style Speaks

www.iso.cuhk.edu.hk/english/features/style-speaks/

The Sense of an Ending

This is the last instalment of 'Style Speaks' in its present format. Let's talk about endings.

Committee papers inevitably invite approvals or directions. A letter ends by reaffirming the relationship between writer and recipient. Depending on the degree of formality or intimacy, one writes:

Yours faithfully, / Yours sincerely, / Yours affectionately,

Fairy tales end by 'And they lived happily ever after.' The novel's is more amorphous, with the modern ones tending to have open endings, that is, endings which are potential beginnings. In the context of movies, the audience would know they will be getting a sequel.

For expository writing in general, the thesis should be re-stated in a novel way in the last paragraph, or conclusion, but nothing entirely new should be said. Thus Bertrand Russell ends the prologue to his *Autobiography* (cf. *Newsletter No. 398*):

> *This has been my life. I have found it worth living, and would gladly live it again if the chance were offered me.*[1]

In a prescient analysis of the demons of globalization (This was in 1990!), Daniel E. Koshland, Jr., long-time Editor of *Science*, states that economic policies and human behaviour obey a few laws just as thermodynamics does. The parallel between nature and society is given a new spark in the last sentence with a common sensation:

> *The obvious correlation between the laws of thermodynamics and the laws of sociodynamics is that whenever they are violated, someone will feel the heat.*[2]

Editor

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[1] Bertrand Russell, 'What I Have Lived for', in *Autobiography* (London: Routledge, 1993).

[2] Daniel E. Koshland, Jr., 'The Laws of Sociodynamics', *Science*, Vol. 249, No. 4967 (27 July 1990), p. 341.

人 事 動 態

Information in this section can only be accessed with CWEM password.

若要瀏覽本部分的資料，

請須輸入中大校園電子郵件密碼。

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物理系系主任夏克青教授
Prof. Xia Keqing, Chairman, Department of Physics

甚麼時候開始喜歡物理？

When did your interest in physics start?

我從小就對無線電、機器感興趣，自己動手安裝收音機。一開始上中學物理課，我就喜歡這一科，覺得所講的知識很美妙，很想探求下去。

I've loved machines when I was little, and I'd install radios myself. When I came across the subject of physics in junior secondary school, I fell in love with it. The stories of physics were fascinating and I wanted to know more.

你唸大學的時代跟現在比，差異在哪？

In what way did your university life differ from those of students nowadays?

說老實話，各有好處。我是文革後恢復高考的第一批學生，上大學的時候，離中學畢業已經兩三年了。班上年齡分布非常寬，最小的十五歲，最大的已經快四十了。大家都如饑似渴，非常珍惜學習機會，拿到了高等數學的習題集，會從頭到尾逐題去做；大部分人是這樣子學習的。

我們在專業課花很多時間，學的比現在深得多，但知識面沒有現在的全面；現在講求均衡教育。現在的學生有互聯網，眼光也不一樣。我們那年代訊息比較閉塞，心思比較單純，文革之後大家只想專心學術，也不想搞學生活動。

I must say both have their merits. I was among the first students to take the nationwide university entrance examination reinstated after the Cultural Revolution. When I entered university, I'd already completed secondary studies for a couple of years. The age difference was huge in our class, the youngest one was just 15, and the oldest was nearly 40. This was a precious opportunity to us and we had a thirst for learning. We made use of the exercise books on higher mathematics and attempted each and every question from beginning to end. This was the typical student life for most of us.

We devoted an enormous amount of time to core subjects, and what we learned was a lot more difficult than what students are learning nowadays. All-round education is what we give our students. They can access the Internet and have broader horizons about global affairs. In our time, we were more simple-minded since China was rather secluded and most people lacked knowledge about the outside world. In the post-Cultural Revolution era, we just wanted to focus on academic work and had no interest to participate in student activities.

物理學範圍廣闊，當初如何選定研究方向？

The scope of physics is all-encompassing. How did you choose which area to focus on?

甚麼事物都有隨機性。做博士後研究時，我去聽別人的課，對湍流發生了興趣。到香港以後，對湍流的興趣愈來愈大，慢慢地做起來了。香港的一個好處是可以做自己喜歡的，沒有人會怎樣干預你。

It was a random match, just like anything else. When I was doing post-doctoral research, I went to a lecture on turbulence, and it was interesting. I later came to Hong Kong, and bit by bit my interest grew, and more research was done. Hong Kong has an advantage because researchers can pick any topic we want, and no one would bother you.

科研人員應該有甚麼抱負？

What kind of vision must scientists have?

最重要是有了解或探索問題的精神。要有一種希望對某個問題作出真正貢獻的抱負，而不是為了發表文章而發表文章，或者看到別人發表了一篇文章，就做些小改動跟在別人後面發。我希望做一些事情讓我退休之後感到比較自豪的。如果我追求文章的話，數量可以比現在多，但你要取捨：是花精力做文章？還是一些不一樣的東西？人一天只有二十四小時，最好做令你自豪而且對所研領域有點貢獻的事。

The most important quality is the will to explore or eagerness to delve into a problem, hoping to find an answer and contributing to the advancement of mankind. The publishing of academic papers and the quest for increased output should not play a part. I want to do something which I'd be proud of upon retirement. If my aim is to issue papers, I can boost the figures. We need to decide: should I write? Or should I do something else that can make a change? We only have 24 hours a day. I should do something that I am proud of, and dedicate my strengths for the benefit of physics research.

研究遇到挫敗時應如何面對？

How do you overcome a setback in scientific research?

不要輕易放棄，還要有開放的心態。做實驗很多時是為了測量或驗證一些已知或未知的東西或現象，但這不是那麼容易的。你要發明一些方法去測量，某些方法不成功，要想一想，是實驗設計還是儀器等出問題。你不能預設一個答案，因為那是自然規律，不是由我們定的。我們可以猜想是不是有這個東西存在，但它不一定是你所想的那個模樣。要客觀地分析自己的實驗，一個一個地排除顯而易見的錯謬，如果最後是這樣子，就是這樣子。

Adopt an open mind and don't give up easily. The purpose of doing experiments is to assess or check a phenomenon we know or have yet to know. That's not an easy task. You need to invent methods to collect data. If it doesn't work, we must reflect on the experimental process—is there anything wrong with that method? Or is the apparatus not suitable? You should not assume a reason. Man can only obey nature. We can guess if such a phenomenon exists or not, but it might not manifest itself in the ways you think. We must be objective in analysing our experiments. We must get rid of obvious errors one by one. If it ends up that way, we must accept it as it is.

在香港培訓物理人才有何優勢和限制？

What are the advantages and limitations of Hong Kong in nurturing physics talent?

香港的限制在於資源較缺乏，社會風氣也較不利有志從事基礎科學研究的學生堅持理想。在美國及不少歐洲國家，物理專業畢業生被認定為能力較高的一群，獲各行各業爭相聘用，只可惜香港在這方面未能追上國際步伐。但另一方面，香港地理位置優越，位處東西文化交匯的中心，正好為中國與國際科研接軌提供人才及經驗。其實，香港中學生的數理訓練在國際上水平相當高，對培訓本土物理人才是有利的。

Few resources are available in Hong Kong, and societal values are not that favourable to students who want to pursue a career in fundamental scientific research and hold on to their ideals. In the US and in European countries, physics graduates are regarded as more competent than they are here, and many firms love to hire them. Hong Kong lags behind that of international society in this aspect. But the good news is that Hong Kong's geographical proximity to China and its role as a hub of eastern and western cultures can help bridge the gap between China and the world, and allow a free flow of scientific personnel and expertise. Besides, the mathematics and science training of local secondary students are of a high standard, and this is beneficial to nurturing local talent.

在中大工作，最令你開心的是甚麼？

What have been your happiest moments in CUHK?

社會延續需要一代又一代的人才，能夠培訓學生，訓練人才，看到自己教的本科生及研究生成為社會上有用的人，給我最大滿足。當然，研究做出來也有滿足感。但長遠來說，培訓人才的影響及貢獻一般會比文章的大。另外就是中大有一個寬鬆的環境，當然，資源更充裕的話會更理想。

We need many generations of young talent to keep our society moving. Here, I have a chance to teach and nurture young students. Seeing them become the pillars of society and making contributions is my happiest moment. Of course, the kind of research I did also brings me happiness. But in the long run, generally speaking my teaching career is far more fruitful than my papers. The University has provided a liberal environment, and it would be better if more resources can be made available.