

autumn/winter 2013

ISSUE 9 第九期

ISSN: 2077-2491

umagazine

澳大新語

我們新校園

夢想騰飛的十一月

Our New Campus — A Dream Come True

副刊 Supplementary Issue

University of Macau Annual Report

澳門大學年度簡報

2012/2013

編者的話 *Editor's Words*

期待三年有餘，澳門大學新校園終於落成，並按澳門法律實施管轄，剛過去的11月，舉行了新校園啟用儀式，見證著澳大人夢想騰飛的第一步。

本期《澳大新語》主題定為「我們的新校園夢想騰飛的十一月」，我們走訪了和澳大新校園有關的諸多人物——從校董會謝志偉主席、趙偉校長，新校園總設計師何鏡堂院士，以及在方方面面參與新校園建設、管理、協調工作的澳大同事，以及廣東南粵集團建設有限公司的朋友。

我們相信：對於一座大學的校園來說，最寶貴、最核心的資產，就應該是「人」——不管是學貫中西、才高八斗的教授學者，孜孜不倦、求知若渴的學生，抑或是兢兢業業、工作細緻入微的行政職員，澳大全賴有他（她）們的努力耕耘和默默奉獻，才為這座新校園注入濃厚的人文氣息、無所不在的學術氛圍，以及上下一心的動感活力。

我們希望，在大家為新校園落成並投入使用歡呼之際，也應該將目光投向他們身上，和他們一起分享這三年多來發生的大小故事，因為，這座校園，是屬於每一個澳大人的，既然這是我們的校園，就讓我們來聯手為她打造一個更加美好輝煌的未來！

Three years and it's finally done! The University of Macau's (UM) new campus has been built and come under the jurisdiction of the Macao Special Administrative Region.

As everyone jumps for joy over the completion of the new campus, we feel those who have been closely involved in the new campus project—those who have worked hard behind the scenes over the past three years—deserve to have their stories told as well. Therefore, in this issue of *umagazine*, whose theme is “Our New Campus—A Dream Come True”, we interview UM's University Council Chair Tse Chi Wai, UM Rector Wei Zhao, new campus chief designer He Jingtang, as well as many other UM colleagues and three staff members from the building contractor Guangdong Nam Yue Group Co. Ltd.

We believe “people” are the most valuable asset of a university as well as a core component of its campus life. It is people—industrious students, scholars well-versed in their areas of expertise, and administrative staff working diligently to support the university's day-to-day operation—that imbue the new campus with character and vitality.

The famous story collection *One Thousand and One Nights* rewards readers with a happy ending. Three years is actually more than one thousand and one nights, but what happens after our interviewees tell their stories? Perhaps not an ending, but a new beginning—the beginning of a future full of new possibilities, which every UM member is responsible for making the most of; after all it is “Our New Campus”.

張惠琴 Katrina Cheong

Autumn/Winter 2013 <<Issue 9 第九期 >>

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出版 Publisher
University of Macau

ISSN: 2077-2491



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我們的新校園 夢想騰飛的十一月

文 | 鄧曉炯、李焯
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Text | Joe Tang, Miumiu Li

Photo | Eric Tam, Manuel Reis, with some provided by the Government Information Bureau

Our New Campus — A Dream Come True





2013年的11月5日，澳門大學在新校區的大學會堂隆重舉行了新校區的啟用儀式。主禮嘉賓包括國務院副總理汪洋、澳門特別行政區行政長官兼澳大校監崔世安、全國政協副主席何厚鏞、澳大校董會主席謝志偉及校長趙偉。應邀的500名嘉賓來自中央、廣東省、特區政府的官員，社會賢達，澳大師生代表以及校友代表，這個時刻標誌著澳門大學已正式步入她的新紀元。

新校區啟用，正式結束了澳大「有校無園」的歷史。澳大校董會主席謝志偉期待這個比舊校園大20倍的新校園，可以為學生提供真正的大學生活。

而新的校園，除了提供了更好的環境外，校長趙偉更寄望藉新校園啟用的東風，可以招攬人才，用澳大越來越茁壯的「梧桐樹」，招徠全球教育「金鳳凰」，實現將澳門大學打造成世界一流學府的宏願。

回首過去的這一個月，對澳大未來的憧憬仍然激動著每個人。借用俄國著名作家車爾尼雪夫斯基的話，送給所有對澳門大學未來充滿希望的人：

未來是光明而美麗的，愛她吧，向她邁進，為她工作，迎接她，盡可能地使她成為現實吧！

On 5 November 2013, the University of Macau (UM) held an inauguration ceremony for the new campus. Officiating guests included Wang Yang, vice premier of the State Council; Chui Sai On, chief executive of Macao SAR and chancellor of UM; Edmund Ho Hau Wah, vice chairman of the National Committee of the Chinese People's Political Consultative Conference; Tse Chi Wai, chair of UM's University Council; and Wei Zhao, rector of UM. Over 500 guests attended the ceremony to witness the landmark moments, including officials from the central government, Guangdong government, and Macao SAR government; prominent community figures; as well as representatives of UM staff, students and alumni.

The inauguration of the new campus, which is 20 times larger than the old one, marked the official end of a long chapter in the university's history where the lack of a decent campus had not only severely hindered its development, but had also prevented the students from enjoying the full experience of campus life. Tse Chi Wai, chair of the University Council, hopes the new campus will change all that.

There is a Chinese saying that, "In order to attract the golden phoenix, the king of all birds, you must first plant the Chinese parasol tree, to create the best environment for the phoenix to thrive." UM Rector Wei Zhao hopes that the new campus will help to attract more outstanding students and staff so that the goal of developing UM into a world-class university can be achieved.

The famous Russian writer Nikolay Chernyshevsky once said something to the effect that every tomorrow is made up of beautiful dreams of today, and one should love them, embrace them, work for them, and try one's best to make them come true.

The new campus is a dream come true, and creating better tomorrows begins with hope today. Read on to learn what hopes and expectations UM members have for the new campus and the university.

澳大學生眼中的新校園

The New Campus Through Students' Eyes



澳門大學新校園大事回溯 *New Campus Milestones*

澳門大學開始制訂《澳門大學十年發展規劃》，其校園發展計劃目標是至少容納10,000名學生。

The University of Macau (UM) began to formulate the 10-Year Development Strategy, with the objective of having a campus with the capacity to accommodate at least 10,000 students.

1/2007

時任澳門特別行政區行政長官何厚鐸在其主持的澳門大學議庭及校董會聯席會議上，首次提出橫琴島撥地建校的可能性。

Edmund Ho Hau Wah, then chief executive of Macao SAR, mentioned for the first time the possibility of building a new campus on Hengqin Island at the Joint Meeting of the University Assembly and University Council at which he presided.

5/2007

時任國家副主席習近平訪澳後，澳大獲悉橫琴新校區可能作為粵澳聯合開發橫琴島的「先行先試」項目。

After Xi Jinping, then vice president of China, visited Macao, UM learned that the new campus could possibly become a pilot project as part of a broader collaboration between Guangdong and Macao in their joint development of Hengqin Island.

1/2009

從無到有，經過數年各方相關政府、單位以及無數人的攜手合作和艱辛努力，澳門大學（澳大）新校園終於正式啟用。當然，澳大新校園，首先應該是屬於澳大學生的校園，因此，在這個令人興奮的時刻，且讓我們來聽一聽澳大同學們對於新校園有怎樣的熱切期待？而在搬入新校園之後，他（她）們對於自己的未來又有怎樣的寄望？

問題(1) 對於新校園的大學生活，你最期待的是……？

問題(2) 展望未來，你希望怎樣更好地裝備自己，迎接人生挑戰？



Chan Chong Hei, Paco
陳頌希

澳門 Macao
工商管理學院
Faculty of Business Administration
四年級
4th-year undergraduate

1. 最期待新校園的活動空間和新圖書館，亦希望能進入自己心儀的書院，希望住宿式書院生活為我增添校園生活色彩。
 2. 希望新校園能提升我的知識、人際關係，更好裝備自己！
1. I most look forward to the large space and the new library. I hope to be accepted by the residential college of my choosing. I hope the residential college can help enrich my campus life.
 2. I hope the new campus can help me to learn better, to make more friends, and to better prepare myself for the future.

A new campus—it used to seem like an impossible dream. Now it's a reality and will soon be occupied. Of course the new campus belongs first and foremost to the students. So what expectations do our students have for the new campus and for themselves in that new environment?

QUESTION 1: *What are you most looking forward to about the new campus?*

QUESTION 2: *How do you plan to better prepare yourself for future challenges?*

Huo Ran, Rita
霍然

中國內地 Mainland China
人文學院
Faculty of Arts and Humanities
研究生二年級
2nd-year postgraduate



1. 最期待新校園能形成更國際化、多元化的校園文化氛圍，以及更濃厚的學術研究環境，讓自己在澳大留下難忘記憶。
 2. 作為一名學生公關大使，希望能將新校園的理念傳遞給更多的人，也期待自己積累導覽經驗，並帶著感悟生活、學習，做更好的自己。
1. I hope the new campus is more international, with more diversity, a richer cultural atmosphere, and a better research environment.
 2. As a PR Student Ambassador, I hope to spread UM's educational philosophy to more people. I also hope to gain more experience in guiding tours. I hope to live and learn with my whole heart, so I can be the best I can be.

開始在校內和校外先後就新校區舉行了21場諮詢座談和介紹會。

UM successively held 21 internal and external consultation sessions and information seminars about the new campus.

2/2009

澳門特區政府向中央提交報告，請求在橫琴島撥地作為澳大建新校區之用，並授權特區政府管轄新校區。

The Macao SAR government officially submitted a report to the central government requesting that a piece of land on Hengqin Island be granted to UM for the construction of a new campus and that Macao SAR be authorised the power to exercise jurisdiction over the new campus site.

24/4/2009

第11屆全國人大常委會第九次會議決定，授權澳門特別行政區對設在橫琴島的澳門大學新校區實施管轄。澳門特別行政區以租賃的形式取得橫琴島澳門大學新校區的土地使用權，租賃期限自新校區啟用之日起至2049年12月19日止。

The ninth session of the Standing Committee of the 11th National People's Congress passed a resolution which authorises Macao SAR to exercise jurisdiction over UM's new campus. The resolution grants the land use right to Macao SAR on a lease basis. The term of the lease is from the day the new campus is put into use until 19 December 2049.

27/6/2009

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Leong Hong Ip, Jason

梁雄熾

澳門 Macao

社會科學學院
Faculty of Social Sciences

四年級
4th-year undergraduate

1. 最期待新校園大學生活裡的各種新挑戰！面對新環境、新事物、新挑戰，想起便倍感興奮呢！

2. 最希望裝備好自己的心態，未來的社會充滿著各種未知挑戰，我們需要的，不再是既有的技能，更需要一顆能適應改變的心。

1. I look forward to the various new challenges! Just thinking about the new experiences and challenges that will come with the new environment makes me so excited!

2. I hope to better prepare myself for the various future challenges. What we need most in today's world is not just expertise, but more importantly the ability to adapt to changes.



Tan Minling, Ling

譚敏鈴

中國內地 Mainland China

社會科學學院
Faculty of Social Sciences

四年級
4th-year undergraduate

1. 最期待不一樣的校園生活，在書院制度下將有更多時間相聚、學習，增加彼此友誼。享受真正的校園生活，留下珍貴的友誼及回憶。

2. 實踐出真知，未來希望能將所學應用於生活。更希望有更多的機會和同學交換意見，聆聽不同聲音，幫助認清自我。多看看未看過的風景，多接觸以前沒嘗試過的東西。

1. I look forward to a different kind of campus life. I think with the residential college system, students will be able to spend more time together, to enjoy a genuine campus life, and to foster deep friendships and make beautiful memories.

2. Real knowledge comes from practice. I hope to apply what I learn to daily life. I also hope to have more chances to exchange ideas with other students so I can listen to different views and know myself better. I also hope to see and try as many new things as possible.

Chang Kin Ian, Monica

曾健欣

澳門 Macao

社會科學學院
Faculty of Social Sciences

研究生二年級
2nd-year postgraduate



1. 最期待將來新校園能吸引更多國際優秀學生，讓我們可以有更寬廣的國際視野，和不同國家的學生進行更深入的學術研討。

2. 將來希望掌握滿文，能順暢閱讀滿文文獻，準備好考博士的研究題目，向最好的「新清史」老師學習。

1. I hope the new campus can attract more outstanding international students so we can carry out more in-depth academic discussions with students from different countries and develop a global mindset.

2. I hope to master the Manchu language so I can read documents in this language. I also hope to find a good research subject for my PhD studies. I want to study with the best teacher in the New Qing History.

澳門大學新校園大事回溯 New Campus Milestones

新校區舉行奠基典禮，由時任國家主席胡錦濤親自為新校區主持儀式，標誌著新校區建設由此拉開序幕。胡錦濤寄望澳大建設成為一所具有一流設施、一流師資、一流人才和一流成果的一流大學。

A groundbreaking ceremony was held, signalling the commencement of new campus construction. Hu Jintao, then president of China, officiated at the ceremony and expressed his expectations for UM to become a first-class university with first-class facilities, first-class faculty, first-class graduates and first-class achievements.



主體工程舉行動工儀式，標誌著新校區項目建設進入新階段。

A construction commencement ceremony for the main structures was held, signalling that the new campus project entered a new phase.

20/12/2009

5/11/2010



Chao Lok Kio, Vicky
周樂喬

澳門 Macao
科技學院
Faculty of Science and Technology
二年級
2nd-year undergraduate

1. 最期待住宿式書院，讓不同學系的本科生互相學習交流。
2. 希望自己能作出改變，成為更有自信的人，學習與人相處技巧，積極面對困難，不退縮。

1. I look forward to living in a residential college with undergraduates from different faculties and departments so we can learn from one another.
2. I hope to make some changes, to become more confident, to learn interpersonal skills, to face difficulties bravely instead of running away from them.



Mok Wal Kin, Joe
莫偉健

澳門 Macao
法學院
Faculty of Law
二年級
2nd-year undergraduate

1. 最期待精彩的書院生活，更大的校園、更好的設備、更多的美食，認識更多朋友。
2. 希望日後有更多時間參加活動。增長智慧，挑戰自己，成為更好的人。

1. I look forward to the colourful residential college life, a bigger campus, better facilities, more food choices, and the chance to meet more friends.
2. I hope to have more time to participate in extracurricular activities. I hope to become wiser, to challenge myself, and to be the best I can be.

Cheang Chi Fal, George
鄭志輝

澳門 Macao
社會科學學院
Faculty of Social Sciences
三年級
3rd-year undergraduate



1. 最期待住宿式書院生活。
2. 希望在人際關係方面更好地裝備自己，因為人際溝通在日常生活的應用實在太重要，所以藉校園搬遷這難得機會，讓自己在這方面更好地實踐，迎接日後人生挑戰。

1. I most look forward to living in a residential college.
2. I hope to improve my interpersonal skills, because the importance of interpersonal communication in daily life just can't be overstated. The new campus is a good opportunity, and I hope to seize this opportunity to improve my interpersonal skills and to better prepare myself for future challenges.

河底隧道主體工程在橫琴、澳門側同時動工。

Construction of the main structures of the underwater tunnel on Hengqin and Macao sides began.

25/5/2011

全部單體槽基礎施工完成，建設全面進入土建施工階段。

Pile foundation works for all the buildings were completed. New campus construction entered the civil construction phase.

20/6/2011

所有單體實現主體結構封頂，隨後全面進入機電安裝、室內外裝修階段。校區市政道路、園林綠化工程也隨之展開。

The main structures of all the buildings were topped out. New campus construction entered the phase of electromechanical installation and interior and exterior works. Landscaping and construction of municipal roads inside the campus also began.

6/2012

河底隧道主體工程施工完成。

Construction of the main structures of the underwater tunnel was completed.

11/1/2013

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Eurico Pinto Marques
馬林傑

葡國 Portugal
社會科學學院
Faculty of Social Sciences
二年級
2nd-year undergraduate

1. 新校園的環境更好，會激勵學生更好的學習。高質量的餐廳也很重要，因為學生應該有多樣的進餐選擇。健身房設施也應該好好考慮，以滿足師生員工強身健體的需要。新校園廣闊的空間將有助於組織更多活動，開拓學生視野。
 2. 我希望提高溝通及合作能力。頓悟學習和思考也不應該忽視。有了這些技巧，同學們就會更加有條不紊，更成熟，更好的應對未來挑戰。
1. I look forward to studying in the excellent environment of the new campus, which I think will motivate students to study more diligently. High-quality restaurants are also important, because students deserve to have a variety of choices. Gym equipment ought to be taken into consideration for those who wish to improve their fitness. The enormous space on the new campus will make it possible to hold more horizon-broadening activities.
 2. I hope to improve my communication and collaboration skills. Insightful learning and thinking should not be neglected. With the combination of these skills, students would be more methodical and mature and would be better able to cope with future challenges.



澳門大學新校園大事回溯 New Campus Milestones

澳門特別行政區立法會通過第3/2013號法律《訂定在橫琴島澳門大學新校區適用澳門特別行政區法律的基本規範》，該法律訂定自橫琴島澳門大學新校區啟用之日起在該校區適用澳門特別行政區法律的基本規範，新校區與橫琴島的其他區域隔開管理，而河底專用隧道為合法進入或離開新校區的通道。

The Legislative Assembly of Macao SAR adopted Law No. 3/2013 regarding the application of Macao laws to UM's new campus on Hengqin Island, stating that the new campus shall be governed by Macao laws starting from the commencement-of-use day, that the new campus shall be segregated from the rest of Hengqin Island, and that the underwater tunnel shall be the legal way to enter or exit the campus.

4/2/2013

新校區依照澳門特別行政區法律實施管轄。

The new campus came under the jurisdiction of Macao SAR.

20/7/2013

首座建築物——住宿式書院12座正式移交澳大使用和管理。

One of the buildings in the residential college area became the first building to be handed over to UM as the user.

20/8/2013



Hoi Wa Heng, Ginny
許華馨

澳門 Macao
工商管理學院
Faculty of Business Administration
三年級
3rd-year undergraduate

1. 最期待體驗住宿式書院生活，學習團體生活和共同成長。
 2. 未來希望自己具有獨立思考和學習能力，多觀察多分析，敢存疑敢發言，不隨波逐流，提高自我危機意識和競爭力。
1. I look forward to living in a residential college where we can learn to live with others in harmony and grow together.
 2. I hope to be able to think and learn independently, to observe and analyse more, to dare to question and ask, to not follow the crowd, to develop a crisis mindset, and to improve my competitive advantage.



Kwok Chun Ting, Jimmy
郭震霆

香港 Hong Kong
社會科學學院
Faculty of Social Sciences
二年級
2nd-year undergraduate

1. 最期待騎單車在新校園的小橋流水之間穿梭，在中心湖畔乘涼、等同學下課，一起到商業區餐廳覓食。
 2. 展望未來，首先要注重身體健康，為迎接未來的挑戰作準備；其次是增進心靈健康，多參與義工等活動，改善社交和溝通技巧，增廣見聞，努力學習課內外的東西。■
1. I look forward to bicycling through the footbridges, waiting for friends by the lake, and going food-hunting in the University Mall.
 2. I hope to stay fit and healthy, to participate in more volunteer activities, to improve social and communication skills, to broaden my horizons, and to learn both inside and outside of class. ■

Gao Hong, Elisa
高紅

中國內地 Mainland China
科技學院
Faculty of Science and Technology
研究生二年級
2nd-year postgraduate



1. 期待新校園會豐富研究生教育模式，在研究生選課設置上更多元化，還有希望舉辦暑期課程，吸引其他地方的研究生來交流。
 2. 未來的最大挑戰是，如何讓自己走向社會時具備競爭力。還有通過與不同領域、不同性格的人交流，讓自己保持饑渴的學習狀態。
1. I hope to see more variety in the mode of education and course enrolment at the postgraduate level. I also hope to see summer courses which attract postgraduate students from elsewhere.
 2. The greatest challenge for me personally is: how do I graduate with a competitive edge? I also hope to interact with people from different fields and of different personalities, to help me stay hungry for knowledge.



澳門大學新校區啟用儀式
Inauguração do Novo Campus da Universidade de Macau
The New Campus Inauguration of the University of Macau
5/11/2013

新校園舉行啟用儀式，國務院副總理汪洋蒞臨主禮。

An inauguration ceremony for the new campus was held. Wang Yang, vice premier of the State Council, presided at the ceremony.

5/11/2013

謝志偉眼中的新校園

The New Campus Through Tse Chi Wai's Eyes



2009年12月20日，澳門慶祝回歸十週年，時任國家主席胡錦濤來澳參與慶典，並主持橫琴島澳門大學（澳大）新校區奠基儀式。在奠基禮講話中胡主席提出澳大要建成「五個一流」（成為一流的大學，有一流的設施、一流的師資、一流的人才、一流的科研成果）的世界級大學。對於中央領導的殷殷期許，澳大校董會主席謝志偉博士認為，這是國家給予澳大的使命：「希望澳大能為中國高等教育走出一條邁向國際一流大學的新路。」

「希望為中國高等教育走出一條新路。」

謝志偉在回溯新校園建設源起時指出，2007年5月，首任澳門行政長官何厚鏵先生蒞臨澳大主持大學議庭及校董會聯席會議。在回應校方提出「有校無園」的發展窒礙時，何特首建議大學嘗試放開眼

On 20 December 2009, which marked the tenth anniversary of Macao's return to China, Hu Jintao, then president of the People's Republic of China, visited Macao to attend the celebrations and officiate at the groundbreaking ceremony for the University of Macau's (UM) new campus on Hengqin Island. In his speech at the groundbreaking ceremony, Hu Jintao used five "world-class" designations to express his high expectations for UM (becoming a world-class university with world-class facilities, world-class faculty, world-class graduates, and world-class achievements). Dr. Tse Chi Wai, UM's University Council chair, thinks that Hu's high expectations has given UM a new mission, which is to explore a new path to becoming a world-class university which hopefully will benefit other universities in China as well.

Exploring a New Path to World-class Status for Chinese Universities

Tse Chi Wai recalls that in May 2007, at the Joint Meeting of the University Assembly and University Council, which was chaired by Edmund Ho Hau Wah, the first chief executive of Macao SAR, the fact that the lack of a decent campus was stifling the university's development was once again brought to the attention of the chief executive. In response, Ho Hau Wah suggested that the university should think outside the box, that is, think outside Macao, to see if a piece of land on Hengqin



2009年6月27日，人大常委會通過決議，批准澳門特區以租賃方式獲得橫琴島澳門大學新校區的土地使用權，並依照澳門法律實施管轄。圖為當天特區政府於政府總部舉行的新聞發佈會。（左起）時任澳門行政長官何厚鏞、運輸工務司司長劉仕勇、澳大校董會主席謝志偉博士及校長趙偉。
On 27 June 2009, the National People's Congress Standing Committee adopted a bill which leases a piece of land on Hengqin Island for the construction of UM's new campus and authorises Macao SAR to exercise jurisdiction over the new campus. This is the press conference held at the headquarters of the Macao SAR government. (From left) Edmund Ho Hau Wah, then chief executive of Macao SAR; Mr. Lau Si Io, secretary for transport and public works of Macao SAR; Dr. Tse Chi Wai, UM's University Council chair; and Wei Zhao, rector of UM.

界、超越澳門地域，看看能否在橫琴島找到一片可作理想校園的土地。一個月後，謝志偉聯同前校長姚偉彬教授和數位校董會成員組團前往橫琴島考察。「我們站在島的東邊回看澳門，不禁一驚，還以為自己仍身在澳門。這種感覺非常強烈，使我們意識到，若能在橫琴建設一個新校區，再以橋樑或隧道連接澳門，不就等於仍在澳門嗎？」校董會考察團返澳後，馬上向行政長官及時任社會文化司崔世安司長匯報，認為在橫琴建設新校區的構思可行，如能獲中央政府批准，在島上劃出一幅隔離土地，即可立時獲得建設理想校園的土地。

自那時起，澳大和澳門特區政府便一直朝這構思的方向努力。經過一年多與中央和廣東省政府的磋商，終於獲得同意，將澳大在橫琴開拓直通澳門的校區計劃提交全國人民代表大會常務委員會（人大常委會）審議。當這建議在2009年初傳出後，澳門以至周邊地區對建議的可操作性都有不少疑慮。正如謝志偉指出：「大家都很關心通關、政策、法律、交通等問題。所以我們在人大常委會審議前開展了20多場諮詢會，諮詢了來自澳大師生、校友、澳門社會、政府和各界人士的意見。」

2009年6月27日，人大常委會通過決議，將廣東省橫琴島東向澳門地段約1.09平方

Island could be obtained to construct a new campus. One month later, Tse Chi Wai, along with former rector Prof. Iu Vai Pan and several University Council members, visited Hengqin Island to examine the feasibility of constructing a new campus there. "When we stood in the east of the island and looked back at Macao, we couldn't help but feel shocked, because we might as well have been in Macao," recalls Dr. Tse. "The feeling was so strong that we immediately thought, 'What if we build a new campus on Hengqin Island, and then connect the new campus and Macao with a bridge or a tunnel? Wouldn't that mean that technically the new campus would still be in Macao?'" Upon return to Macao, the team reported the findings of the visit to Ho Hau Wah and Chui Sai On, then secretary for social affairs and culture of Macao SAR, suggesting that the idea of constructing a new campus on Hengqin Island was feasible if a plot of land separated from the rest of Hengqin Island could be obtained with the approval of the central government.

From that time on, UM and the Macao SAR government worked hard to gain approval for this proposal. After more than one year's negotiations between the Macao SAR government, the central government and Guangdong government, it was decided that the proposal to construct on Hengqin Island UM's new campus directly linked to Macao be submitted to the Standing Committee of the National People's Congress for deliberation. When news of this proposal began to spread in early 2009, many in Macao and the neighbouring regions voiced doubts about its feasibility. As Dr. Tse points out, "People expressed concern over immigration clearance, policy issues, legal issues, transport, and many other related issues. So we organised more than 20 consultation sessions before the proposal was deliberated by the National People's Congress Standing Committee. We consulted the opinions of our faculty members, our students, our administrative staff, our alumni, as well as Macao residents and the SAR government. In other words, we consulted the opinions of people from all walks of life."



謝志偉與大學議席成員、校董及大學管理層於2011年到新校園考察。

Dr. Tse, members of the University Assembly and University Council, and UM's top management visit the new campus site in 2011.

公里劃歸澳門特區政府以澳門法律實施管轄，按澳門辦學方式建設澳門大學新校園，並容許在國家水域內的河底建設由特區政府管理的隧道與澳門相連。這史無前例的決議一次性解決了澳門人所有的疑慮，也證明了中央對澳門市民意見的重視。

“

我們的目標是清晰的——我們要向世界一流大學邁進。

Our goal is clear — to become a world-class university

”

澳大新校園比舊校園約大20倍。它的設計風格和建築水平，都充分反映了

胡主席在奠基典禮中提出的「一流校園」的要求。新校園建築面積約94萬平方米，建築物60多棟，各種設施，包括科研基地、教學和學習空間、體育場館、文娛場地、以至師生住宿生活設備，和校園的景觀，都有專項嚴謹細緻的安排。澳大能在短短三年多從無到有地建成具有國際水平的校園，中央政府的照顧，特區政府的承擔，粵澳的合作，和澳大領導團隊的努力，都是缺一不可的。

謝志偉認為，新校園應儘量發揮優勢，為學生提供真正的大學校園生活。「當初宣佈新校園計劃後，我們做的第一個重大決定就是採用「住宿式書院」模式。每個人的成長都有各自的特色，大學也必須有屬於自己的文化，而這文化是由學生和老師們共同建立和積累起來的。住宿式書院是國際一流大學廣泛採用的教育模式——讓師、

On 27 June 2009, the National People's Congress Standing Committee adopted the new campus bill, which not only allowed UM to construct a new campus on a piece of land of approximately 1.09 square kilometres in the east of Hengqin Island, Guangdong province, but also authorised Macao SAR to exercise jurisdiction over the new campus to be connected to Macao via an underwater tunnel which is to

be built in an area of water under the jurisdiction of China but which shall be governed by the Macao SAR government. This unprecedented decision ingeniously addressed, once and for all, all the concerns Macao people had raised, and proved how much the central government values the opinions of Macao residents.

UM's new campus is approximately 20 times larger than the old campus. It has a building area of approximately 940,000 square metres, with more than 60 buildings and various teaching, research, sports, recreational and residential facilities. It completely meets former president Hu's "world-class" expectation, whether in terms of the architectural style or construction standards, which is no mean feat to be accomplished in just a little over three years, and which would not have been possible without the great support of the central government and the Macao SAR government, the close collaboration between Guangdong and Macao, as well as the hard work of UM's management team.

Dr. Tse thinks that UM should make full use of the advantages of the new campus so that students can have the full experience of campus life. "After we announced the plan to build a new campus, the first major decision we made was to adopt a residential college system," notes Dr. Tse. "Everyone's journey of growth is unique, and every university needs to have its own distinctive culture. But this culture can't be built overnight; it needs to be jointly fostered by our students and teachers over time. The residential college system is a mode of education widely adopted by many world-

生之間在校園共同生活的環境中有機會迸發更多思想碰撞。」

「千載難逢的大好機遇。」

謝志偉透露，按照大學2007年開始，每五年更新一次的《十年發展策略》，新校園將增設一至兩個學院，並且不斷提升師資和學術研究水平，努力向「建設世界一流大學」目標邁進。他說：「澳大要成為一流大學，學生的素質、心態，和校園的學習環境等基本因素都很重要。至於如何達到這個目標，就要看我們自己的努力了。我們的目標是清晰的——我們要向世界一流大學邁進。」

從新校園構思、籌建到完成，對謝志偉來說，都是不可思議的。有一次香港中文大學前校長劉遵義教授來澳大演講。閒聊之間，談起澳大的新校園項目，謝志偉感嘆說，這真是個百年一遇的機會。不料，劉教授看了他一眼，說：「不，這不是百年一遇。」當時謝氏嚇了一跳，以為自己誇大了些甚麼。但對方話鋒一轉，說：「這不是百年一遇，而是千載難逢的機會啊！」劉教授出乎意料的回應，謝志偉至今難忘。「所以說，我們要好好利用這機會，才對得起澳大師生、對得起澳門，和對得起國家的重托。」

經中央政府、粵、澳三方努力，澳大新校園終於今年7月20日正式由中國人民解放軍第五支隊移交澳門海關接管，依照澳門法律實施管轄，成為新中國在一國兩制下歷史性的第一次創新舉措。謝志偉有幸全程參與，難抑激動心情，當日更賦詞一闕，調寄〔鷓鴣天〕。慶賀之餘，更滿懷希望，憧憬澳大更美好的明天。 ■

class universities. By arranging for teachers and students to live together, this system creates more opportunities for teacher-student interaction as well as peer interaction, which in turn inspires more new ideas.”

“It’s an opportunity that comes only once in a thousand years.”

Dr. Tse discloses that according to UM’s *Ten Year Development Strategy*, which was formulated in 2007 and updated every five years, the university will establish one to two new faculties on the new campus, and will constantly increase teaching and research quality, in order to achieve the goal of becoming a world-class university. “The quality and mindsets of our students as well as the campus environment are, among other things, essential to achieving the goal of developing UM into a world-class university. As for how we will achieve that goal—it depends on our efforts. But our goal is clear—to become a world-class university.”

For Tse Chi Wai, the new campus has been an unimaginable enterprise, from the time the idea was conceived, to the time preparations formally began, to the day the construction was finally completed. Once during a chat with Prof. Lawrence J. Lau, former vice-chancellor and president of the Chinese University of Hong Kong, who came to UM to give a lecture, Dr. Tse mentioned that the new campus project was an opportunity that came only once in a hundred years. Prof. Lau looked at him and said, “No, it’s not.” Dr. Tse was taken aback, but before he had time to wonder if he had perhaps exaggerated a little, he heard Prof. Lau say, “It’s not an opportunity that comes only once in a hundred years. It’s an opportunity that comes only once in a thousand years!” Dr. Tse says those words always stick in his mind. “So we must make the best use of this opportunity, otherwise we would be letting down our students, our teachers, the people of Macao, and our country.”

Thanks to the joint efforts of the central government, Guangdong, and Macao, UM’s new campus was officially handed over by the Fifth Division of the Chinese People’s Liberation Army to the Macao Customs and came under the jurisdiction of Macao SAR on 20 July, in an unprecedented and innovative implementation of the “One Country, Two Systems” policy. Dr. Tse witnessed the handover ceremony throughout. Overcome with excitement, he wrote a poem later that day, to celebrate the joyous occasion and to wish UM a brighter future. ■

子夜無聞戍鼓鳴
橫琴隔岸換防兵
寶宮彩染三年夢
寶島衝通兩制盟
歐陸影 嶺南情
中西巧配偶天成
江山指點神來筆
朗瑪珠峰勇啓程

*Midnight strikes, yet no drums roar;
while guards change on the Hengqin shore.*

*Three-year dream, fond and dear;
with colour, joy and hopeful tear.*

*The world now gasps, at this precious land
showcasing grandeur of the ingenious plan.*

*European flare and Lingnan charm,
a heavenly blend—elegant, wise, and calm.*

*Touches from above, here and there,
strokes of the mastermind, everywhere.*

*See how she strides, proud and bold,
towards the crest of the Everest!*



趙偉眼中的新校園

The New Campus Through Wei Zhao's Eyes

「為甚麼澳門需要一所好大學？」

2009年6月27日，全國人大常委會通過議案，授權澳門特別行政區按照澳門法律對橫琴島澳大新校區實施管轄，如火如荼的新校園建設工作隨即開展，如今校園已經啟用。校長趙偉認為，澳大新校園這個跨境發展項目，不但為澳門教育事業提供了新的發展空間，更是「一國兩制」制度下一次相當具突破意義的嘗試，說明「一國兩制」概念可以再進一步被豐富、被發展。

「你說為甚麼澳門需要一所好大學？因為一個地方要發展，一定要有培養、儲備、提供人才的地方。特別是澳門講產業多元化，最大瓶頸就是人才，所以澳門大學必須要提升，在思維上，也要超越50多萬人（的澳門）的考量；第二，我們能否在澳門現行的制度下提升澳大？」

“Why does Macao need a good university?”

On 27 June 2009, the Standing Committee of the National People's Congress adopted a bill that authorises Macao SAR to exercise jurisdiction over the University of Macau's (UM) new campus on Hengqin Island. After that the construction of the new campus began. It's been three years now and the new campus has been built. Rector Wei Zhao notes that the new campus is a cross-border project. It not only provides fresh impetus to higher education development in Macao; it is also a groundbreaking event within the framework of the “One Country, Two Systems” policy, and shows that this policy has the potential for further development and enrichment.

“People ask me why Macao needs a good university. There are three reasons. First of all, if a place wants to realise sustainable development, it must have a university that provides a steady supply of talent, especially given that people are always talking about how imperative it is for Macao to become more economically diversified,” says Wei Zhao. “The greatest obstacle to realising economic diversification in Macao is the lack of talent. That's why UM

甚至定一個宏偉目標，若干年後提升至世界一流大學，我們要闖一闖這條路，這個經驗不僅是為澳門，也是為國家，為中華民族在高等教育的提升探索；第三，兩岸四地的其他三地高等教育發展都很快，比如說北京大學、台灣大學、香港大學都是世界百名以內的優秀大學，恰恰澳門沒有，澳門若要在「一國兩制」的體制下繼續發展，在人才培養方面就不應、也不可以被邊緣化。」

澳大校長趙偉強調，大學的功能不光是教室上課，更重要的是實現全天候、多方位的教育，「我們的教學理念一分为四，首先是專業教育，我們希望培養菁英，所以還有通識教育，這些都是課堂內的；至於課堂外呢，要知道知識是無限的，踏出校門很多東西就已作廢，所以要學會自己挖掘知識，因此研習教育這是第三；第四，我們強調校園內互動，也就是社群教育。澳大將是世界上第一所大學對學生在這四方面都有完整的要求。」

趙偉期待進入新校園後，校方將在與澳大教育理念相配套的硬件基礎上，加快推進相關工作：「澳大已很明確希望成為一流大學，所以我們會用這個硬件基礎做幾件事情：第一，擴充學科。尤其是較基礎的學科，好的大學，它基礎學科一定要好，另外我們也會在一些亮點專業比如微電子專業等方面大力推進，切合國際趨勢與社會需要；第二，澳大對澳門社會還應有所擔當，我們會擴大對澳門乃至周邊的服務，比如說我們的圖書館等設施，可以向澳門市民或其他高校開放，我們一些好的設備也可以開放。我們有科研基地，希望周邊一些地區的高校來進駐，如果他們的地方有困難，可以到我們這裡來一起做科研。」

趙偉說，以前有種說法是「大學靠大師不是靠大樓」，但他卻認為大師重要，大樓也重要，

must aim higher and go beyond serving just the 500,000 people of [Macao]. Secondly, is it possible for UM, under the current system, to aim higher?—say, towards becoming a world-class university, which some might think is a bit too ambitious for a young university like UM. Well, I say, we're going to have to find a way to make it possible, aren't we? And the experience we gain in the process will not only benefit Macao, but also China as a whole. We could try to explore a new path to increasing the quality of higher education in China. Third, higher education is developing very fast in mainland China, Hong Kong, and Taiwan. For example, Peking University, Taiwan University, and the University of Hong Kong are all excellent universities that are ranked among the top 100 in the world. But no universities in Macao have made it into the top 100. If Macao is to realise sustainable development under the 'One Country, Two Systems' policy, it can't afford to be marginalised in higher education."

UM Rector Wei Zhao stresses that the function of a university should not be limited to education inside the classroom; a university should try to provide a multifaceted education. "Our educational philosophy consists of four components. The first is discipline-specific education," explains Wei Zhao. "We hope our graduates are among the best, so we've also got general education, and these two forms of education take place inside the classroom. What about outside the classroom? Knowledge is boundless. A lot of things you learn from college classes become obsolete before you even graduate, so it's imperative that one learns to discover new knowledge, and that's where the third component—research and internship education—comes in. The fourth component is community and peer education, and we emphasise interaction within the campus. UM will be the first university in the world to have explicit requirements for the students in all these four areas."

Wei Zhao hopes that after moving to the new campus, the university can speed up the progress of several things that are high on the agenda. "We have a very clear goal, which is to become a first-class university, and the new campus provides an excellent foundation for achieving this goal. So building on this foundation, there are several things we will need to do," notes Wei Zhao. "First, we need to expand our disciplines, especially foundation disciplines, because all good universities have strong foundation disciplines. We also need to vigorously develop certain disciplines like microelectronics to keep in line with the international trend and to meet the demand of society. Secondly, our university needs to fulfill its responsibilities to the local community, and



新校園還是蕉林一片時，趙偉與澳大管理層到橫琴考察，商量建築設計。

UM's top management visits Hengqin Island. At that time, the new campus site was still a plantain plantation.

「現在我們有了大樓，條件有了很大的改善，吸引大師雖然不容易，但我們具備有利的條件，所以也成功吸引來不少人才，因為第一，我們的教學理念比較新，比如澳大全面實行的書院制度；第二，我們校園的條件比較好；第三，我們的財務狀況相對也在不斷改善，使我們越來越接近世界一流大學。這幾個優勢加在一起，還有我們的宣傳力度也在不斷增大，各界媒體對我們也很關注，讓大家都看到澳大的前景。」

澳大近年在研究方面增速很快，另一方面新校園內也規劃了高端研究基地，如原有的兩個國家級實驗室，以及新批准建立的應用物理及材料工程研究中心等，都是針對全球最高、最新的研究領域。如今有了橫琴新校園這棵漂亮的「梧桐樹」，相信

更不難吸引全球各地的「金鳳凰」。不過，趙偉校長強調，更長遠的目標，還在本土人才的培養，「真正的大師，應該是在當地成長起來的。所以我們現在也加大力度，吸引年輕有為的教師，為他（她）們提供充分

條件，希望20年後，他們的成名之日，就是澳大的成名之日，當然，更重要的，就是澳大畢業生的成名之日，那也就是澳大的真正成名之日了。」

「希望校園能夠具有教育功能。」

早在新校園設計階段，趙偉就考慮如何在校園設計內體現出澳大的教育理念，「我相信，環境對培養人才有很大作用。既然有這麼好的機會來設計、建造一個新校園，那就應該把教育理念也考慮進去。我曾在設計階段和何鏡堂院士說，希望以後我們的學生在校園裡走一圈，就等於修了一個學分的課，就是希望校園也能具有教育的功能。」

趙偉指出，新校園設計處處體現了多元、互動、平實、包容等元素，「比如圖書館廣場，你們也許覺得它很不一樣，有很高的樹、很綠化的植物，形狀像一隻碗，但這個

to this end, we will increase the scope of our service to Macao and even the neighbouring regions. For example, we will share some of our resources, such as the library, with Macao residents and other universities. Our scientific research base also welcomes universities from the neighbouring regions. If they don't have the necessary facilities or space, they could come here and we could do research together.”

Conventional wisdom holds that, “The success of a university relies not on facilities but on faculty.” But Wei Zhao thinks that while having excellent faculty is important, facilities are important too. “Now we have excellent facilities on the new campus, which are much better compared to the old campus,” says Wei Zhao. “Although it's not easy to attract the best talent, we do have our advantages, and that's why we have obtained a lot of talent. What are our advantages? First, our educational philosophy is comparatively advanced. For example, we have the residential college system. Second, our new campus is large and well-equipped.

Third, our financial position is improving constantly. These advantages, combined with the fact that we are stepping up our promotional efforts, have attracted a lot of media attention and have helped the public to see the potential of our university.”

In recent years UM is developing quickly in research. There is a research base on the new campus which will house the two state key laboratories as well as the newly-approved research centre for applied physics and engineering, with focus on the most cutting-edge research areas. There is a Chinese saying that, “In order to attract the golden phoenix, the king of all birds, you must first plant the Chinese parasol tree, to create the best environment for the phoenix to thrive.” Now with the

beautiful new campus serving as the “Chinese parasol tree”, it shouldn't be difficult for the university to attract “golden phoenixes” from around the world. However, Rector Wei Zhao stresses that the university's long-term goal is to nurture local talent. “We need to have more home-grown talent, and that's why we are stepping up our efforts to attract young scholars. We will provide the best possible conditions for them, and hopefully 20 years from now when their names become well-known, our university will also become well-known. Of course, the quality of our graduates is also very important, perhaps even more important. The day our graduates become well-known is the day our university truly becomes a well-known university.

“We hope the campus itself is educational.”

Wei Zhao has insisted from the outset that the campus should reflect the university's educational philosophy. “I believe environment plays a major role in education,” notes Wei Zhao. “It'd be a waste of such a wonderful opportunity if we didn't incorporate our educational philosophy in the design. I once talked to Mr. He Jingtang, who is the chief designer of our new campus and also a member of the Chinese Academy of Engineering. I told him that we want to have a campus which is in and of itself educational—a campus from which the students can learn something simply by walking in it.”



2009年舉行諮詢會，趙偉向大學師生諮詢新校園規劃意見。
UM holds many consultation sessions in 2009 to hear comments about new campus planning.

外方內圓的設計是非常包容的，有利於大家散步、溝通、互動交流。還有整個校園都是可以步行的。因為有連廊連起來，就算是南方經常下雨的天氣，同學可以從教室步行至任何一間宿舍，或任何一個老師的辦公室，人與人的往來就是體現整個校園，是非常互動的。你可以在連廊中一邊走路一邊聊天，而不是學生關在教室裡，老師關在辦公室裡，大家難以見面。」



新校園設計體現校園的互動
There are many covered walkways to facilitate walking in all weathers

在前期設計階段，趙偉說校方一直與總設計師何鏡堂院士及其團隊緊密互動，互相溝通，務求新校園的設計風格能嵌入澳大

的教育理念，「你看，這中央教學樓看起來比行政樓更神氣，對不對？我們就是希望給同學一個觀念，校長不是大學裡的皇帝，我們不是用行政來管大學的，教學才是大學的核心。所以你們看中央教學樓有頂，但行政樓沒有，是我們特意把它去掉，而且還比教學樓矮一點，我們就是有意地『去權威化』，希望同學們有這樣的感覺，任何人生來都是平等的，校長、老師、學生，每個人在社會裡發揮的作用雖然不同，但人生來都是平等的。所以我們沒有用大台階的鋪設，同學們會感覺到學生活動中心和校長大樓各有特色，絕不是一座大樓居高臨下把學生活動中心壓得小小的，其他如教學樓、學生宿舍等也各具特色，都是希望體現這種平實、平等的教育理念。」

展望未來，趙偉更是充滿期待，「新校園還有很大空間可以發揮我們的想像力，比如我們有條『校友大道』，這條路將會很有特色，希望將來每屆畢業校友都可以在這裡做一樣東西留給母校，比如種一棵樹或立一個塑像，只要他認為這個東西能代表他們（的校園回憶）。20或30年後你再來看，這條路將是百花齊放的。而且，在新校園裡，我們還有很多這樣的空間。」

Wei Zhao points out that ideas like “diversified”, “interactive”, “unassuming”, and “tolerant” are reflected in many of the design details. “Take the square in front of our library for example,” explains Wei Zhao. “Perhaps you think

it’s very different. It’s got tall trees and it’s shaped like a bowl. It’s rectangular on the outside and circular on the inside, which makes it a great place to take a leisurely walk. Actually the whole campus is very walking-friendly because of the covered walkways, which is a deliberate design that takes into consideration the frequent rainy days in south China. Our buildings are connected by covered walkways, so the students can easily walk from their classrooms to their dormitories or any teacher’s office, even on rainy days. You can talk with your friends, coworkers, teachers or students while walking through the covered walkways. The campus is an interactive campus only when people in it can interact with one another easily, which you can’t do if you are cooped up in your classroom or office all day.”

“
校長不是大學裡的皇帝，我們不是用行政來管大學的，教學才是大學的核心。
The rector is not the emperor of a university.
The university isn’t run by administration.”

”

Wei Zhao says that during the early phase of design the university maintained close liaison with

He Jingtang’s team to make sure the university’s educational philosophy is embedded in the design of the campus. “You see, the Central Teaching Building looks more impressive than the Administration Building, right? That’s because we want to convey to the students the message that the rector is not the emperor of a university. The university isn’t run by administration. Teaching is the core here. You could also see that not only is the Central Teaching Building taller than the Administration Building, it also has an extra structure on the top, whereas the Administration Building doesn’t. Also, there are no stairs leading up to my office or the offices of our vice rectors. These are deliberate designs through which we hope to convey the message that we are all born equal. We may play different roles in society—be they rector, professor, or student, but we are all born equal. We want to make sure that the Student Activity Centre and the Administration Building each has its distinctive character, instead of one overshadowing the other. Other buildings like the Central Teaching Building and the residential buildings all have their own distinctive character. All these design details are a reflection of the ideas of “unassuming” and “equality”.

“There are a lot of places on the new campus where we can use our creativity,” says Wei Zhao. “For example, we have a road called Alumni Avenue. We hope each of our future graduates can leave something on this road as a gift to his or her alma mater. It could be a tree or a statue—anything they think can best represent their memories of the campus. And when they come back 20 or 30 years after their graduation, this road will be full of memories in the form of flowers, trees and the like. We have many such places on the new campus.”

何鏡堂眼中的新校園

The New Campus Through He Jingtang's Eyes

負責澳大新校園總設計的中國工程院院士何鏡堂，是位和藹可親的謙謙長者，雖然滿頭銀髮，卻精神矍鑠，說起話來鏗鏘有力，臉上也總是掛著親切笑容。曾主持設計上海世博會中國館等眾多著名建築的何院士說，自己很鍾愛這次為澳大設計的作品，「新校園是具人文氣質、自然、生態的國際化校園，以學生為本，以環境育人，希望這裡的師生能擁有一邊享受美景一邊交流學習的環境。」

何院士指出，澳大新校園設計具有四大特點：「第一，整個校園是生態校園，它將嶺南水鄉生態特色融入進來，自然生態又體現南方特色。校園很自然的水，形成幾個島（三個大島，一個大半島），島邊有溪水，有綠化草坪，還有橋、塔樓等融水鄉環境為一體的環境，這環境是具交往性的，是一個生態化兼具嶺南水鄉及南歐特色的人文環境。我希望能做到環境育人，在裡面學習，學生與學生之間，不同學科的老師之間，老師與同學之間，可以邊聊天邊欣賞環境，這樣能激發靈感，催生很多創新思維。」

“I love the University of Macau's (UM) new campus,” enthuses He Jingtang, chief designer of the campus and member of the Chinese Academy of Engineering. “It is a student-oriented campus, with beautiful scenery and a rich cultural atmosphere. We hope to design a campus where teachers and students can study and teach while at the same time enjoying the beautiful scenery.” Silver-haired but looking hale and hearty, He Jingtang explains his design ideas in a sonorous voice, with a warm smile on his face. Having designed many famous buildings, including the China Pavilion at the Expo 2010 Shanghai China, He says he loves his design of UM's new campus very much.

He points out that there are four characteristics in the campus design. “First, the design incorporates many natural elements typically found in the riverside towns in Lingnan region,” explains He Jingtang. “There are several islands (three big islands, and one big peninsula) surrounded by water. And there are brooks, lawns, footbridges and hip-roofed buildings by the islands, which are all typical elements of a riverside town. Such an environment is communicative, combines the styles of Lingnan architecture and southern European architecture, and has a rich cultural atmosphere. Environment plays an important role in education. We hope the campus can fulfil that role. We hope the beautiful campus provides inspirations for UM teachers and students and helps them to come up with many creative ideas.”



何鏡堂向澳大學生闡述新校園的四大設計特色

He Jingtang explains the four characteristics of the new campus design to UM students

「第二個特點是書院式校園佈局。書院通常是在歐洲傳統校園裡，我們去過英國、美國，看了牛津劍橋和美國常春藤院校，書院式管理實際上是一種生活，可以形成書院式的大組團，每個大組團就是一個島，裡面就是讀書的地方，和學生生活的地方連在一起。而幾個學院群就形成族群組團式佈局，這佈局的最大優點就是便於交流，同一書院組群，同學吃飯及交流融在一起。組團和組團之間也就三百米，走過去很近。就算從一個大的學院群到另一個大的學院群，距離也很近。而我們這種學院佈局是連體的，下面是生態公園，上面是學習交流空間，組團之間是由二樓和連廊連在一起。」

「第三，校園以步行為主，人車分開，各行其道，下邊是車行道，上邊是學生活動空間，是人車分流的立體交通體系；第四，建築風格融合了葡萄牙的南歐風格與嶺南情調，建築及空間的處理，既有自由靈活的南方特色，也有南歐相對嚴謹的特色，穿插在一起。比如很多細部處理按南歐風格，如拱廊、塔樓、窗的比例，整座建築沒有大玻璃幕牆之類太現代的東西，所採用的石頭也顯得古典風味濃郁，但進入校園內，我們又吸收了嶺南比較自由靈活、因地制宜的特色，將兩者結合在一起。」

澳大新校園內學院眾多，雖然整體風格統一，但同時又各具設計特色，身擔設計大旗的何院士是怎麼做到的？「雖然整個校園是同一的風格，但是到了建築物的細節又都不一樣，比如樓道、學院入口、石塊和面磚等等，總之，是在基本風格統一的前提下，也有一定的變化，這叫做『和而不同』。」

從接手設計到新校園落成，何院士不時來走走看看，更笑言自己「每次回來都不想走了」：「你看，這裡涼風輕吹，湖水自然，感覺舒暢。建築與環境互相輝映，是個能激發人學習的環境，希望將澳門大學辦成具有人文氣質、重視人才培養的國際化校園。」

“

新校園是具人文氣質、自然、生態的國際化校園，以學生為本，以環境育人。

It is a student-oriented campus, with beautiful scenery and a rich cultural atmosphere.

”

“The second characteristic concerns the layout of the campus. Both the residential colleges and the faculties are organised in the form of clusters, or islands,” He Jingtang says. “Residential colleges are commonly found in old European universities. We visited the University of Cambridge and the University of Oxford in the United

Kingdom, as well as the Ivy League schools in the United States. The residential college system is in essence a way of life. Each residential college is a learning and living community. The greatest benefit of such a layout is that it facilitates interaction, not just within the same cluster, but also across different clusters, because different clusters are within 300 metres’ walking distance of one another, connected by covered walkways on the second level, with study areas on the upper level, and green space on the lower level.”



何鏡堂（中）與校長趙偉及副校長黎日隆到新校園視察

He Jingtang (middle) visits the new campus with Rector Wei Zhao and Vice Rector Alex Lai

“Third, the campus is walking-friendly, with separate routes for pedestrians and vehicles. Vehicle lanes are on the ground level, while the student activity space is on the upper level. Fourth, in terms of architectural style, the campus is a mix of Lingnan architecture and southern European architecture. Many details are reminiscent of southern European architecture, like the ratios of the arched corridors, hip roofs and windows. We didn’t use a lot of modern elements such as glass walls for the buildings. Even the stone materials have a classical feel. But on the other hand we also borrowed the relatively free and flexible elements of Lingnan architecture to suit the local conditions.”

Walk around the new campus and one will notice that while the whole campus is of a consistent architectural style, each building has its distinctive character, which He Jingtang says is a deliberate arrangement because he wants to create the effect of “harmony in diversity”.

From the day he undertook the responsibility for the design of the new campus to the day the construction was complete, He Jingtang often visited the new campus, and every time he did, he felt like staying here forever. “You feel so comfortable here, with the beautiful environment, lake, breeze, and the rich cultural atmosphere,” He says. “This is the kind of place that quiets your mind and helps you focus on study.”

數字看新校園

New Campus Figures

佔地面積 <i>Campus size</i>	1.09km ²
總建築面積 <i>Total building area</i>	940,000m ²
南北長 <i>South-north length</i>	1,600m
東西長（以圖書館中軸線處計） <i>East-west length (Axis of the library)</i>	≈ 650m
建築物數量 <i>No. of buildings</i>	> 60
河底隧道長（供車輛行駛） <i>Length of underwater tunnel (vehicle lanes)</i>	1,570m
河底隧道長（供行人使用） <i>Length of underwater tunnel (pedestrian lane)</i>	500m
乾型實驗室、濕型實驗室、 電子電腦實驗室數量 <i>No. of dry labs, wet labs, electronics and computer labs</i>	> 280
輕型汽車車位 <i>Parking spaces for light vehicles</i>	≈ 2,500

電單車位 <i>Parking spaces for motorbikes</i>	≈ 1,300
單車車位 <i>Parking spaces for bicycles</i>	≈ 4,000
園林綠化用地面積 <i>Green spaces</i>	430,000m ²
水體面積 <i>Bodies of water</i>	110,000m ²
園林綠化苗木種類 <i>Varieties of seedlings</i>	≈ 180
喬木配置數量 <i>No. of trees</i>	> 22,000
電梯數量 <i>No. of lifts</i>	> 200
中央空調系統覆蓋的 建築物面積 <i>Building area of the buildings serviced by the central air-conditioning system</i>	> 260,000m ²
其他類型的空調設備數量 <i>No. of other types of air-conditioning units</i>	> 11,000
校區市政道路 （公共與私家道路） <i>Municipal roads inside the campus (incl. public & private roads)</i>	5,588m

新校園建設工程數字

New Campus Construction Figures

混凝土使用量 <i>Concrete</i>	≈ 1,000,000m ³
設計圖則張數 <i>No. of design drawings</i>	≈ 100,000
鋼筋總用量（噸） <i>Reinforcing bars (tons)</i>	≈ 150,000
支護樁及地基加固樁數量 <i>No. of support piles and foundation reinforcement piles</i>	> 95,000m
參與建設的施工單位 <i>No. of construction units involved</i>	> 20
建設高峰期同時施工人數 <i>No. of construction workers during peak period</i>	≈ 10,000

	
第一期工程（填土吹沙） <i>Phase-1 works (land levelling)</i>	車載砂土堆填逾 26,000船次 >26,000 truckloads of sediments
	船運吹填逾 1,000船次 >1,000 shiploads of sediments
動用砂船、推土機、 土方運輸車輛、挖掘機數量 <i>No. of dredgers, bulldozers, earth movers, and excavators</i>	≈ 200
自境外進入新校區的 水泥使用量（噸） <i>Cement from outside Macao (tons)</i>	77,400 (2009–12/2011)



一千零一夜之後 新校園的背後故事

文 | 編輯部、校園記者李穎桐

■ | 譚金榮、何杰平、李思、部分由受訪者提供

Text | Editorial Team, UM Reporter Iris Lei

Photo | Eric Tam, Jack Ho, Manuel Reis, with some provided by the interviewees

A Tale of Two Cities and a New Campus



澳門大學新校區是粵澳合作的標誌性項目，由承建商廣東南粵集團有限公司負責建設，澳大則以用家的身份參與相關的協調工作。自2009年新校區獲全國人大常委會批准後，澳大各部門人員陸續展開與新校園的各項工作。三年多來，在澳大一方，由建設到籌備搬遷的各個階段，在沒前車可鑑下，每位工作人員緊守崗位、克服史無前例的種種挑戰。在另一邊廂的橫琴，逾萬工人在這塊土地上日夜奮戰，60多幢建築物一座接一座拔地而起，是他們的汗水成就了今天的新校園。《澳大新語》走訪了三位於工地工作的夥伴以及12位澳大職員，與讀者訴說他們這一千多個日與夜的難忘故事……

It was the best of times, it was the worst of times. The University of Macau's (UM) new campus, a cross-border collaborative project that involved the two cities of Macao and Zhuhai, is finally completed. For both UM and Guangdong Nam Yue Group Co. Ltd., the building contractor of the campus, the three years of construction has been one of the most challenging times but also—in retrospect—one of the most satisfying experiences. When we set foot on the new campus for the first time after its completion but before its handover to Macao, we were impressed by its spaciousness and beauty. By that time all the construction workers had cleared out of the site. The racket was replaced by a dreamy quietness. The sky was a seamless expanse of blue broken only by the hip roofs. Where countless workers poured concrete along with their sweat, now stood simple yet elegant buildings. Those who had worked hard to turn what had once seemed an impossible dream into a reality were nowhere to be seen, but their stories shouldn't be lost. In this issue of *umagazine* we interview three people from Nam Yue Group and 12 staff members from UM to learn their stories of the campus construction project.

「我估計在全世界都很難見到。」

"I'm afraid I'd be hard-pressed to find another project quite like this."

馬蔭賢
Ma Yinxian

所屬單位
廣東南粵集團建設有限公司（承建商）
From
Guangdong Nam Yue Group Co. Ltd.
(building contractor)

負責新校園相關的工作：
管理工人施工

New campus-related responsibilities:
Managing construction workers



來自承建商的馬蔭賢是在2011年5月新校區進入建築階段後才進場工作的，回憶第一次踏進新校區，他的第一感覺是：「這麼大啊，工作到幾時才是盡頭？」

馬蔭賢說，同時興建60多幢大樓，需要做好整套規劃方案，「在內地，我參與興建了很多學校，但像澳大新校區這麼大規模，而且要一次到位的項目，整套規劃都很完善，我估計在全世界都很難見到。也正因工程規模龐大，所以好多工作不能到現場才做，須預先作好準備，到現場是監督工人有沒有落實方案的要求，否則就會亂套。」

馬蔭賢表示，進入新校區工作以來，面對困難數之不盡，每天總有新難題要解決，「最困難是施工初期，由於土質複雜，需要採用真空預壓進行軟基處理，這對工人的技術要求也相應提高。加上內地和澳門標準不一樣，哪方標準高就跟哪方，因此提高了工程的標準。另外對審批材料技術的要求也相當高，這些加起來，就大大增加了施工難度。」

在建設高峰期，有逾萬名工人在新校區日夜作業，馬蔭賢施工範圍所管理的工人約2,000名，「工人們都很配合，工作積極，大家都想把工作快些做好，因此壓力很大。現在看到校園由平地到一幢幢大樓建立起來，內心是有點成就感。」

Ma Yinxian started working on the construction site in May 2011, after the new campus project entered the phase of building construction. When he saw the construction site for the first time, he said to himself: "Wow, I didn't know it was this big! When are we going to finish all the work?"

Constructing more than 60 buildings on the campus simultaneously required meticulous plans. "I've participated in the construction

of many schools in mainland China, but I'm afraid I'd be hard-pressed to find another project quite like this. It was such a large-scale project, which needed to be completed in one fell swoop," says Ma. "And that's why we had to make a lot of preparations beforehand; otherwise things would have been in a complete chaos. My job on the construction site was to make sure the workers were executing the plans as per the requirements."

Ma has lost count of the number of problems he had to solve on the construction site, because new problems arose on a daily basis. "The most difficult time was during the beginning of the construction," explains Ma. "Because of the complicated geological conditions, we needed to improve the soft soil using vacuum preloading, which put higher demands on the workers. Moreover, the construction standards in mainland China are different from those in Macao, and we needed to follow whichever are higher. Also, the procedures for approving materials were very strict. These all added to the difficulty."

At the height of the construction, more than 10,000 workers worked around the clock. Ma was in charge of approximately 2,000 of them. "The workers were very cooperative. They didn't need to be told what to do. Everyone wanted to get the job done as soon as possible, because of the pressure of the tight construction schedule," says Ma. "And now seeing all these buildings, I feel so happy and proud!"

「我能親身參與，非常難得，也很有自豪感。」

"I'm honoured and proud to be a part of this project."

鄭曉明
Zheng Xiaoming

所屬單位
廣東南粵集團建設有限公司（承建商）

From
Guangdong Nam Yue Group Co. Ltd.
(building contractor)

負責新校園相關的工作：
隧道技術協調和管理

New campus-related responsibilities:
Technical coordination and management
for tunnel construction



As a cross-border collaborative project between Guangdong and Macao, the new campus presented a great challenge in coordination because of the need to follow two sets of standards and laws. To make sure that targets for construction schedule, quality, safety and costs were met, Guangdong Nam Yue Group Co. Ltd., the building contractor of the campus, established a project management team comprised of more than 400 people with different specialties to be responsible for project control, technical coordination, and onsite supervision.

Zheng Xiaoming, who started working on the construction site in 2009, was one of the

由於新校區屬粵澳兩地合作項目，工程涉及跨境施工，加上兩地不同標準、法律等因素，大大增加了協調工作的難度。為成功實施澳大新校區項目，確保項目的進度、質量、安全和成本目標，據悉，廣東南粵集團組建了一支由400多名各專業技術和業務骨幹組成的項目管理團隊，對項目進行總體控制、技術協調和現場監督。

2009年來到新校區工作的鄭曉明，是這支南粵團隊的核心成員之一，他主力負責隧道技術協調和管理方面的工作，工作範疇包括前期組織工程測量、地質堪察、方案設計、施工圖設計、組織專家論證等。回望在新校區工作的三年多日子，鄭曉明感觸良多。他表示，隧道工程引入了多項新技術，具七級抗震能力，並按百年一遇防洪標準設計，隧道基坑開挖工程量龐大，整項工程開挖出的泥土達62萬立方米，可見其工程之艱鉅。「新校區項目獲兩地政府重視，建設的部門和人員眾多，大家住在這裡，吃在這裡，全身心

core members of this team. Zheng was mainly responsible for technical coordination and management for tunnel construction. He organised engineering and geological surveys, schematic design, working drawings, and expert evaluation. Zheng explains that numerous new technologies have been adopted in the construction of the underwater tunnel to make sure that the tunnel is strong enough to withstand magnitude-7 earthquakes and floods having a 100-year recurrence interval. The foundation pit works alone generated 620,000 cubic metres of refuse, indicating the enormous workload. "Both the governments of Guangdong and Macao SAR have invested a lot of time and energy in this project," says Zheng. "A lot of workers were involved in the construction. They worked and lived on the construction site. Everyone went all out, from the management team to ordinary workers. Being there—watching everyone working together with nothing held back, you couldn't help but want to give your best too. The excellent rapport allowed us to work efficiently. And I've learned a lot from the high standards of Macao."

Zheng spent the best part of the past three years on the construction site. Even on the rare occasions when he did manage to take a few days' leave to

投入工作，親身感受到不分上下、全力投入的拼搏精神，很受鼓舞和感染。大家彼此間很有默契，令工作效率提高。澳門方對技術要求很嚴謹，自己也從中獲益很大。」

鄭曉明形容過去三年差不多都是在校園裡度過的，難得有機會才放假回一次在深圳的家。有時候甚至在返家途中，仍要繼續透過手機短信和電郵與新校區的工程人員聯絡，互通信息，繼續工作。「在新校區工作留下了很多難忘回憶，大家都知道時間短、任務重，但一起為趕工程而努力奮鬥，通宵作業，非常難忘。今天見到新校區和隧道能夠完工，很開心，這都是靠團隊努力的成果。我能親身參與這麼有影響力的工程，真是非常難得，也很有自豪感。」

go back home in Shenzhen, he didn't stop working—he continued to confer with his colleagues about work via text message and email. "Working on the new campus project has left me with a lot of unforgettable memories," says Zheng. "Yes we had to finish a lot of work on a very tight schedule, but I'll never forget how everyone worked together, sometimes around the clock, to meet the deadlines. I'm so happy that the campus and the tunnel have been completed. It would not have been possible without the joint efforts of the entire team. I feel very honoured and proud to be a part of this influential project." ■



河底隧道工程，攝於2012年。
The underwater tunnel in 2012

「為了向澳門交出滿意的項目，確實付出了很多。」

"We've made a great effort to deliver a satisfactory campus."

羅軍容
Luo Junrong

所屬單位
廣東南粵集團建設有限公司（承建商）

From
Guangdong Nam Yue Group Co. Ltd.
(building contractor)

負責新校園相關的工作：

大學會堂、行政樓、體育設施、科技學院、健康科學學院、工程建設等現場管理及協調工作。

New campus-related responsibilities:

Onsite construction management and coordination for the University Hall, the Administration Building, the sports facilities, the Faculty of Science and Technology, and the Faculty of Health Sciences.



Luo Junrong is an engineer at Guangdong Nam Yue Group Co. Ltd. He started working on the construction site in May 2010.

Back then the place was overgrown with weeds. Mud and sand were everywhere. He remembers thinking on his first day on the site, "A major construction project like this would be a wonderful opportunity to prove my ability."

One of the greatest challenges Luo faced was the car park connecting the University Hall and the Administration Building. "That place used to be a flood relief channel, so the geological conditions were very complicated," explains Luo. "There were deep mud and a

羅軍容是南粵的工程管理部工程師，2010年5月來到新校區工作，當時新校區還是到處沙泥，一片荒草。他回憶自己當時的感受是，「能夠參與這麼重要的建設項目，確是一個很好展示自己能力的大好機會。」三年來，他全身心投入新校區的建設，渡過了這段艱辛、難忘的日子。

在羅軍容負責的工作中，最大的挑戰，是處理大學會堂和行政樓相連的地下停車場，「由於該地原本是排洪渠，淤泥深，拋填石多，地質十分複雜。工程人員要開挖的地下停車場，面積達三萬平方米，工程難度非常大。大學會堂內設有一個專業升降舞台，要求開挖負九米深，這屬功能非常強大的設計要求，大大增加了工程的複雜性。加上澳門方對工程標準要求很高，在施工時間很短的情況下，我們需要投入更多時間和設備去做。」

lot of rocks used as filling material. We needed to excavate the site to build an underground parking lot of about 30,000 square metres, which was very challenging. Then there was the University Hall. We needed to dig down to nine metres deep in order to build a standard drop stage, which was also a very demanding task. The high construction standards required by Macao and the tight construction schedule further added to the difficulty. We had to spend more time and use more equipment than usual to get the job done."

Luo says the challenge is reflected in many details. For instance, stone materials were used for more than half of the over 60 buildings on the campus, amounting to a total surface area of 220,000 square metres. And for some of the buildings, such as the University Hall, the Administration Building, the Wu Yee Sun Library, the University Gallery, and the Central Teaching Building, stone materials were used as cladding for the entire facades. "The stone materials were mined from Fujian, Mr. He Jingtang,

羅軍容表示，新校區工程難度之大還體現在很多建築細節上，例如，全校建築物使用的石材達22萬平方米，在60多幢建築中，使用石材的建築物超過一半，至於大學會堂、行政樓、圖書館、大學展館、中央教學樓，更是整幢外牆都使用石材，以及全部採用掛石的施工工藝，「這些石材都是從福建的礦山開採，品質和顏色都經何鏡堂院士親自鑑定，僅搬運石材就動用了2,000多輛車次，花了三個多月才完成鋪石材的工序。」

在這段為新校區拼搏的日子裡，羅軍容可謂有得也有失，「學到了很多新東西，尤其是從澳門工作人員身上學到人才培養和項目管理的技巧，但也失去了不少陪伴家人的時間，早一陣子，我五歲的女兒入院做手術，自己也沒法抽空回去看看，心裡也很難過。其實不單是我，身邊很多同事也一樣，為了向澳門交出滿意的項目，確實付出了很多。」

羅軍容形容，三年來，同事們都處於非常緊張的狀態，在最後衝刺階段更是一絲也不能鬆懈。他說，「要待新校區完全交付後，我們才能真正鬆一口氣。」

chief designer of the campus, appraised the stones for their quality and colours himself. It took more than 2,000 truckloads of stone materials and over three months to complete the entire procedure.”

Over the past three years Luo has gained a lot of experience in personnel training and project management from his fellow workers from Macao, but the gain has come at a price—less time for his family. “A while ago, my five-year-old daughter had a surgery, I didn’t even have time to go back to check on her,” says Luo. “I felt awful that I wasn’t there for my baby girl, but work was so busy it was simply impossible to leave. And I wasn’t the only one—a lot of my colleagues have sacrificed a lot in order to deliver a satisfactory campus to Macao.”

Luo says that over the past three years he and his colleagues have worked at full throttle, especially towards the end of the construction. “I think we won’t be able to truly relax until after the new campus is completely handed over to Macao.”



興建中的大學會堂，攝於2011年。
The University Hall in 2011

「新校園又是另一新挑戰。」

"The new campus presents a new challenge."

宋傑堯 Gordon Song

所屬單位
澳大校園發展部

From
Campus Development
Office, UM

負責新校園相關的工作：

統籌新校園建築規劃、後續建設工程、監督新校園建設進度。

New campus-related responsibilities:

Coordinating new campus planning, carrying out post-handover construction works, and monitoring construction progress.



Gordon Song is the director of the Campus Development Office at the University of Macau (UM). Before joining the University of East Asia, the forerunner of UM, in 1985, he was the site manager of a construction company which was responsible for constructing several buildings on UM's old campus, and Gordon was in charge of the Tai Fung Building, the K. C. Wong Building, the Cultural Centre, and the Ho Yin Convention Centre. Over the years, his office has experienced a lot of changes—its functions have changed continuously to keep pace with the development of the university, and the number of staff members,

which was only six or seven in the beginning, has increased to more than 20.

澳大校園發展部總監宋傑堯1985年加入澳門大學（前東亞大學）之前，在一間負責澳大樓宇建設項目的建築公司任駐地盤經理，他曾主理興建的大學建築物包括大豐樓、王寬誠樓、文化中心及何賢中心等等。加入澳大至今，宋傑堯所在部門的職能不斷更新，幾乎和澳大成長足跡步步相扣：從「總務部」到「校園管理部」再到由「校園管理部」分拆組成的「校園發展部」，人數也由最初的六、七人增至現時20多人。

2009年，澳大新校園項目批准下來之後，原來遙不可及的夢想突然變成觸手可及的現實，「我們就開始想，要求建一個怎樣的校園呢？」在學校管理層帶領下，有關同事曾作多次外訪，參觀各地高校的校園規劃構思及經驗，並搜集高校規劃面積指標等相關資料作參考。「當時在手頭資料嚴重不足的情況下，要寫一份較詳盡的校園規劃書，在約一個月內做好幾十棟樓的使用要求及設計任務書，以供有關設計及承建單位依從進行設計及工程估算等工作。比如要多少棟建築物？樓房的功能是什麼？需要什麼設施？辦公室的面積標準？課室的基本分佈及數量？學生宿舍要多少面積？並需訂定學生數量分配、師生比例等等的數據，還要收集各部門想法，比如需具什麼中心？什麼實驗室？

In 2009, the new campus proposal was officially approved, which meant what had once seemed like an impossible dream finally became an attainable reality. But that was also when Gordon and his coworkers' lives became increasingly busy. "That was when we began to think, 'what kind of a campus do we want to build?'" recalls Gordon. He and his colleagues, led by the university's top management, visited many universities around the world to learn from their experience in campus design and planning. "We needed to prepare a detailed campus planning document with extremely limited reference materials to draw on," says Gordon. "We needed to complete the design specifications for several dozen buildings within just a month so that the designer and the contractor could carry out their work. We needed to determine how many buildings we would need, the functions of each building, the facilities needed, the standard sizes of the offices, the rough number and distribution of the classrooms, the size of the residential area for the students, the student/teacher ratios, and the like. On top of these tasks, we needed to collect comments and suggestions from the various offices and departments on a lot of issues, such as what centres and laboratories they would require. Things like how the campus was going to operate in the future also needed to be considered. What made matters worse was the shortage of staff. We were literally in a race against time, and everyone worked extremely hard."

日後校園的運作模式等都要考慮，在當時僅有的人力資源下，我們日夜趕工，非常辛苦。」

新校園建設規模巨大，且預定建設期短促，「在新校園設計期間要看很多圖紙，看完後要在短期內作回覆、出意見書，一個星期至少要出兩、三份意見書，然後還要和承建（南粵）、設計單位開會，逐一討論每份意見書的內容，每次都要花最少大半天。」2009年底至2011年，宋傑堯與其團隊處理了兩萬張圖紙，他說那段時間幾乎所有同事都要加班，夜晩到11時多才回家已是司空見慣。說起來，宋傑堯的團隊非常多元化：除了各有所擅的澳門同事之外，也有部分來自外地，如曾參任廣州大學城建設指揮，熟悉國內建築事務的內地同事；有台灣來的園林工程師及建築師；馬來西亞籍的工料測量師、還有四位香港同事，他們分別在大型建設、機電和項目管理方面均擁有豐富經驗……。雖然團隊成員背景各不相同，但大家合作無間，並肩扛起新校區這史無前例的大項目。

在新校區進入驗收但仍處於內地管轄階段，宋傑堯要不時兩地穿梭，「我基本每週去最少一次（新校區）。今年3、4月份開始的建築物驗收初期的工作量很大。同期需處理大量的校園後續建設工程，有很多功夫要跟進，如負責及跟進設計、開標、評標等程序。」隨著新校區於7月正式交由澳門管轄後，校園發展部成為第一個全面遷往新校區內辦公的部門。

回顧三年多來的風風雨雨，宋傑堯說心境有高潮起伏，「試過有段時間趕計劃書、看圖則，很辛苦。有時原本認為對大學有利的設計構思，因種種原因而被否定或不能順利執行時，難免也有不开心及感到挫敗，但事後想想，這麼大的項目，牽涉的單位眾多，過程中難免遇到不同意見及決定，對錯難辨，實不應有所介懷。自己最深刻的感受是，看到大家從頭到尾都那麼團結，那麼積極踴躍參與及投入工作，從校長到每個職員都是如此，同事間的情感自然變得更緊密。」

如今宋傑堯一方面對氹仔校區依依不捨，另一方面也為新校區的建設成果心感雀躍，「無論如何，澳大舊校園能在一個這麼小的地方發揮出這麼多功能，的確非常難得。當然，新校區提供了更大、更宏偉的空間供師生學習生活，而一片這麼大的地方，如何善於利用、發展和管理，又是另一新挑戰。」



加入澳大前，宋傑堯已主理興建過多個舊校園建築。
Gordon had been in charge of constructing several buildings on the old campus even before he joined UM

One of the greatest challenges of such a large-scale project was the tight construction schedule. "During the design phase, not only did we need to look at tons of drawings, but we needed to give our feedback in writing within a very short time frame. We had to complete at least two to three such written reports every week," recalls Gordon. "Also we needed to meet with the contractor and the designer to go through these written reports item by item. Each meeting took at least half a day." From late 2009 to 2011, Gordon and his teammates pored over more than 20,000 drawings. During that period, almost all his colleagues had to work a lot of overtime, so much so that they later became used to working in the office until past eleven o'clock at night. Luckily for Gordon, he has a diverse team with complementary strengths and expertise. Some of his teammates are Macao natives, with the rest coming from around the world. One of them comes from mainland China and was a member of the Construction Command Centre for the Higher Education Mega Center in Guangzhou. Another was a landscape engineer and architect in Taiwan before he joined UM. One is a

Malaysian quantity surveyor. Four others are from Hong Kong and have rich experience in large-scale construction and electromechanical works as well as project management.

During the time after the new campus entered the phase of quality inspection but before it came under the jurisdiction of Macao SAR, Gordon needed to commute between the two campuses on a regular basis. "During that time I went to the new campus at least once every week," says Gordon. "Our workload increased considerably around March and April when the buildings on the new campus began to receive quality inspection. At the same time we needed to

handle a large amount of follow-up work, such as preparing invitations to tender and evaluating the bid documents we received." After the new campus came under the jurisdiction of Macao SAR, the Campus Development Office became the first office to move to the new campus entirely.

Looking back on the past three years, Gordon admits he has had his share of setbacks and frustrations. "We worked extremely hard preparing design specifications and going through all those drawings. Sometimes we came up with design ideas which we thought were in the interests of the university but which were banned for various reasons, naturally I got a little upset and frustrated," concedes Gordon. "But later I came to realise that difference in opinion is unavoidable for a large project like this, because it involved a lot of parties, and it really wasn't necessary to get upset about it. And what touched me the most was the fact that everyone was working hard together towards the same goal, and everyone was giving their best, from the rector to the rank and file, and colleagues became closer in the process."

Gordon is very excited and happy to work on the new campus, although he says he sometimes misses the old campus. "It was very impressive what the university has achieved on such a small campus, with all its limitations," says Gordon. "Of course, the new campus is much bigger and more advanced, but how do we make good use of it and how do we develop and manage it in the future? That's a new challenge."

「大家都希望盡力做到最好。」

"Everyone is giving their best."

黎明佳
Dick Lai

所屬單位
澳大校園管理部

From
Campus Management
Office, UM

負責新校園相關的工作：

負責新校園家具購置、現校園家具盤點，以及交通、保安、清潔及資產管理等。

New campus-related responsibilities:

Procuring furniture for the new campus, stocktaking of furniture on the current campus, as well as transport, security, cleaning and asset management.



Dick Lai, head of the Security and Transport Section of the Campus Management Office, recalls that one day in April 2010, Vice Rector Alex Lai called him to his office and asked if he was interested in taking charge of an important job. That's how Dick was transferred to the Rector's Office to take on a new responsibility—procuring more than 100,000 pieces of furniture and small equipment for the new campus as well as making an inventory of the approximately 50,000 pieces of furniture on the current campus.

回想起來，校園管理部保安及交通事務處黎明佳（Dick）處長還記得，2010年4月的一天，黎日隆副校長把他叫到辦公室，問他有沒有興趣負責新校園其中的一項重要工作？就這樣，Dick調入校長辦公室並承擔起一項全新任務——整個新校園逾10萬件新造家具及小型設備配置工作，同時還負責重新盤點現校園全部約五萬件家具。

Dick原本負責學校的保安、清潔及資產管理等工作，早在2009年，他所在部門就已經承擔起不少與新校園有關的工作，「當初在很短時間內要提供大量資料供設計之用，比如清潔、綠化、保安及財產管理等各個組別工作及放置物品所需的空間等，還有偌大的新校園內60多幢建築物的保安服務如何分區管理？區域該有多大？需要什麼設備等等。突然接手這麼大規模的項目，又從沒有類似經驗，而且只有三年這麼短的時間，對我及同事來講是一個很大的挑戰，也是難得的機遇及很新鮮的體驗。」

負責新校園的家俱購置這項工作，聽起來雖然容易，做起來卻龐雜無比，「比如說，有多少間教室？多少間辦公室？有多少人辦公？需要哪些家具？還有書院及職員宿舍有多少間房？單／

Dick Lai was formerly responsible for the university's security, cleaning and asset management. As early as 2009, his department was already assigned many new campus-related tasks. "For example, we needed to provide a large amount of data within a short period of time to facilitate the design process," recalls Dick. "Since we have different units, we needed to decide how much space each unit would need to work and put their stuff. Also there are more than 60 buildings on the new campus, so we needed to decide how we were going to divide the security presence into different sections and how big each section should be, as well as what equipment we would need. Being suddenly assigned to such a large-scale project with such a tight schedule and with no prior experience to draw on was at once challenging and exciting for me and my colleagues."

Procuring furniture for the new campus sounds simple, but as Dick and his colleagues will tell you, is actually extremely complex and involves the consideration of many details. "For example, questions we had to consider included, How many classrooms and offices will we have? How many people will be in each office? What kind of furniture will we need? How many rooms will we have in the residential colleges and the Staff Quarter? How many single rooms and double rooms will we have? How many people will actually live in those rooms? How many labs, pantries and bathrooms will we have? How much furniture do we need for all these rooms? We needed to go through a sea of drawings to arrive at some accurate numbers before we could work out a budget," explains Dick. "Because if we couldn't get those numbers as accurate and early as possible, our actual cost

雙人房有多少？將會有多少人入住？……前期要看圖計算準確的辦公室、宿舍、課室、實驗室、茶水間及洗手間等使用數量，還要定出各類房間家具標準及數量，才能為整個項目做出較準確之預算。如果初始的數字不準確，到後期發現預算有很大出入的話，時間緊迫再改動較困難。」同樣的挑戰，亦在保安系統的組建方面，「比如說選擇哪一種保安系統？利用門禁系統及中央監視系統協助保安工作，以減少人員數量？還是在每幢建築物配置保安人員？」

三年來，他們走訪了香港、台灣、新加坡等地的大學，參考不同的方案，再配合澳大新校園實際情況來研究，最後，Dick和他的團隊提出「分區管理」概念，將校園分成若干個區域，再將保安監控單位集中於一區集中管理，更方便也更有效。「由於新校園將使用較先進的樓宇管理系統、消防系統、門禁系統及中央監視系統、智能燈控系統、電梯對講機系統等，故可節省人手。但需要詳細安排閉路電視鏡頭及門禁系統的門鎖分配等，需要看每一張圖紙，仔細研究了每一棟建築物每一層樓作分配及安排，來來回回看了很多遍，非常花時間，但那些圖紙都給我們看得滾瓜爛熟了。」

較早前，當新校園仍處於工地狀態並由南粵管理，出入隧道的車輛均須與南粵協調，取得車輛行車證才可進入新校園。目前，已為近200輛大學的職員車及外判車輛辦理了行車證，亦需對該等車輛進行監管，確保其於新校園內遵守與南粵協議的泊車管理規條。Dick每天都要奔走於新校園和現校園之間，處理新校園保安及交通事務和家具運送及安裝等問題，另外，由於新校園已有一千多名學生入住，亦需與交通事務局方面協調公交线路等等各項事務。回顧三年多的日子，Dick說最困難的是面對時間方面不確定性，「最大挑戰是很難有落實的時間表，就拿家具來說，新校園所需的十萬件家具，生產、運送、安裝都需要時間，如果時間表不確定，處理起來難度就很大，部分家具的供貨期前後改了三次，我們花了很多時間與供應商協調。可幸的是，無論保安、交通及家具購置各項工作都有一班不辭勞苦、任勞任怨的團隊拍檔同心協力去協助理。」

8月份首批家具搬入新校園宿舍後，Dick隨即與安健及環境事務辦公室合作，進行首次甲醛和揮發性有機化合物含量的測試，更邀請學生會代表一起參與，「測試結果顯示，甲醛含量達到安全標準，證明製造商有根據招標要求採用環保木材。」也許，這一刻，對於黎明佳處長來說，是最令人欣慰的時刻，「我們一班同事都很搏命，大家都希望盡力做到最好，為遷校工作劃上完美句號。」

would be substantially over budget, which would be very difficult to revise with the tight schedule.” Dick and his colleagues faced the same challenge when trying to decide on a security system for the new campus. “We needed to decide what kind of security system we wanted to use,” says Dick. “Should we use the access control system and the CCTV system (closed circuit television system) to save manpower or should we put security guards in front of every building?”

Over the past three years Dick and his colleagues visited universities in Hong Kong, Taiwan, Singapore and other places, hoping to combine other universities’ experience with UM’s unique situation. In the end, Dick and his teammates proposed dividing the campus into several sections and positioning the security monitoring unit in one section for more convenient and effective management. “The new campus has various advanced systems, such as the BMS (building management system), the fire protection system, the access control system, the CCTV system, the smart lighting system, and the lift intercom system, which helps us to save manpower. But the locations of the cameras and the electric locks for the access control system need to be carefully planned. So we studied every floor of every building, and we looked at those drawings over and over again until we knew every detail like the back of our hands, which was very time-consuming.”

Because the new campus is now being managed by the contractor Nam Yue Group as a construction site, all vehicles need a permit to enter and exit the underwater tunnel, which is the only legal way to access the new campus. So Dick and his colleagues need to coordinate with Nam Yue Group to obtain permits. So far they have obtained permits for nearly 200 vehicles for UM staff and outside personnel. They also must monitor these vehicles to make sure that they comply with the relevant new campus parking rules as agreed upon with Nam Yue Group. Dick’s daily routine now involves commuting between the current campus and the new campus, as well as handling security, transport, and the delivery and assembly of furniture. Also, because over 1,000 students have already moved onto the new campus, Dick and his colleagues must coordinate with the Transport Bureau of Macao SAR about the bus routes and other related matters. Looking back on the past three years, Dick says, “The greatest challenge was the lack of definite timelines. Take furniture for example. The manufacturing, transportation, and assembly of the over 100,000 pieces of furniture for the new campus all required time. And the lack of definite timelines added to the difficulty. For example, the furniture delivery date was changed three times, and it took us a lot of time to coordinate with the supplier. But luckily, I have a team of great partners who never complained about the hard work.”

After the first batch of furniture was moved onto the new campus in August, Dick immediately carried out the first air quality test in collaboration with the Office of Health, Safety and Environmental Affairs. Representatives from the Students’ Union were also invited to participate in the testing. “Our test results showed that the content of formaldehyde was within the safe range, which proved that the manufacturer did use environmentally friendly materials as per the requirements of the tender documents,” Dick explains. Dick says that despite the heavy workload, everyone is giving their best, hoping to bring the relocation to a perfect ending. ■

「新校園是大家工作的動力和目標。」

"The new campus is what has motivated us."

陳勝勇
Chan Seng long

所屬單位
澳大校園管理部

From
Campus Management Office, UM

負責新校園相關的工作：
樓宇土建維修及養護

New campus-related responsibilities:
Building repair and maintenance



勇兄站在他有份建造的鐵皮屋實驗室留影
Chan participated in the construction of the tin-roofed houses behind him

Chan Seng long, affectionately known as Brother long among his colleagues, joined the University of East Asia (UEA), the forerunner of the University of Macau (UM), as a site engineer, in 1979. He was one of the first engineers at UM. At the time he was employed by the Ricci Island West Ltd., the company that founded UEA. Over the past three decades, he has witnessed the growth of the university every step of the way. When he learned in 2009 that the central government had granted a piece of land to UM for the construction of a new campus which would be 20 times larger than the existing one, he couldn't help but gasp in wonder. "I remember thinking, with such a huge campus, the university's potential would be limitless," says Chan.

人稱「勇兄」的陳勝勇，1979年加入澳大前身東亞大學駐地盤工程師寫字樓，成為澳大第一代建築工程人員，受聘於東亞大學的創辦公司Ricci Island West Ltd.。30多年來，他見證了澳大從零開始，到規模漸漸擴大的各個成長歷程。2009年，當他獲悉中央撥出一塊比澳大現校園大20倍的土地興建新校園這個震撼消息後，不禁驚嘆：「能有這麼大的地方發展，往後澳大一定無可限量！」

「剛建校時，真的可以用荒郊野嶺去形容大學的環境，我們用水車運水上山，要用發電機發電，創校時期真是非常艱難。全校只有數十名學生，建築物也只有三座，分別是大豐樓、第一座宿舍和第二座宿舍，課室數量非常少。大學正式開課後，發現課室不夠，唯有急急用貨櫃組裝來充當臨時課室。」勇兄對當年建校的艱辛點滴仍記憶猶新。

"When the university was first founded, it was practically a deserted wilderness," recalls Chan. "We had to ferry water uphill with water wagons and generate power using a generator. There were only a dozen students and three buildings, the Tai Fung Building and two dormitory buildings. In fact when the first semester began, we found the existing classrooms were far from enough, so we had to convert cargo containers into temporary classrooms."

Indeed, the problems arising from an acute shortage of campus space and facilities are not only among Chan's deepest memories, but they were also the biggest headache he had to grapple with before the new campus was available. "We had to rack our brains trying to convert the existing facilities to serve different purposes in order to meet the university's changing needs," says Chan. "For example, the Ho Yin Convention Centre, which was originally designed as a restaurant, was subsequently converted into a library, an office building, a classroom building, and a lab building."

回憶在澳大30多年的工作，最令勇兄頭痛的就是校園面積狹窄的問題，「澳大的土地資源及樓宇空間面積一直相當緊絀，學生和教職員常感嘆地方不敷應用，我們負責校園建設的只好絞盡腦汁，千方百計配合大學的發展需要，在有限空間內想辦法找地方改建。比如，何賢會議中心，當年設計是用來做餐廳的，其後改為圖書館，之後又用來做學院辦公室、課室、實驗室，反覆修改，都為配合教學的需要。」

他形容最辛苦的階段，是大學被政府收購後，由2,000多名學生迅速擴展至3,000多名學生的發展階段，「教員辦公室、學生課室及教學設施，對空間需求相應增大，地方又不多，我們只好不斷反覆裝修和改裝樓宇空間，應付需要。」位於銀禧樓對面那一排被澳大人稱為「鐵皮屋」的實驗室，勇兄指當年構想是用三年左右，應該可以搬入新的大樓，殊不知竟使用至今，歷時逾廿載，可見澳大的校園空間實在不夠應用。

校園空間不足，確實局限了大學的發展，2009年中央批出在橫琴建新校園的好消息，從此改寫澳大「有校無園」的歷史，勇兄對此深感興奮：「當知道新校園空間比現校園大20倍之後，真是難以想像，未來大學可以發展到甚麼程度。」但與此同時，勇兄也擔心新校園的大規模，將給維護和管理工作帶來一定的挑戰，「過去三年，大家都在積極計劃和預備，如計算將來要增加多少設備，如何管理和維修，以及人手調配等，做好充足準備，搬進去的時候就不會手忙腳亂。」

三年來，勇兄見身邊同事默默為新校園日以繼夜埋頭苦幹，無怨無悔，專心一意為完成新校園項目努力工作，「新校園是大家工作的動力和目標，雖然帶來龐大的工作量，但大家在一起工作得開心，就不會去計較。」勇兄坦言，經歷了從大學創校到新校園的各個階段，滿足感非常大。他也相信，澳大未來的發展一定會更好、更快。 ■

Perhaps the need for a bigger campus was never more acutely felt than when the number of students quickly surged from 2,000 to more than 3,000 after the university was acquired by the local government. "Imagine the sudden increase in the demand for faculty offices, classrooms and teaching facilities," says Chan. "The university was crying out for more space, which we didn't have, so we had to renovate, reconstruct, and otherwise improvise, to meet the demand." Opposite the Pearl Jubilee Building stand a row of what UM members now refer to as the "tin-roofed houses", which were among the temporary facilities built during that period. The original idea was that these buildings, which were intended as temporary laboratories, should last the university approximately three years before a new lab building was available.

It's been 20 years, and these tin-roofed houses are still in use, a constant reminder of how the lack of a decent campus has severely hindered the university's development. And having experienced firsthand the painful constraints of a tiny campus, Chan was especially excited when he learned the good news in 2009 that the central government had approved the construction of a new campus on Hengqin Island, a decision many believe has opened a new chapter in the university's history. "When I learned that the new campus was going to be 20 times larger, I had a hard time imagining it, and even harder to imagine was how much farther the university could go with such a large campus," says Chan. But even in the midst of his excitement, Chan has always been aware of the enormous challenges the new campus would bring in terms of maintenance and management. "Over the past three years, everyone was busy making preparations," says Chan. "For example, we needed to calculate the quantity of new equipment we would need to procure. We also needed to think about how we were going to manage and maintain those facilities as well as how we were going to assign each task to different person. We want to be fully prepared so we wouldn't be thrown into a state of chaos when the actual relocation takes place."

Over the past three years, Chan and his colleagues have worked extremely hard, sometimes sacrificing weekends and holidays in order to get the job done. "The new campus is what has motivated us," says Chan. "It has given us a lot more work for sure, but we don't mind because it has also given us an exciting goal to pursue." Chan says that being able to witness the different stages of the university's development has given him a great sense of satisfaction, and he believes that with a new campus, the university's future will be even brighter. ■

「將60多幢大樓接生到這世界上來。」

"I was like a midwife helping to bring over 60 babies into this world"

劉梨麗
Lila Lao

所屬單位
澳大校園發展部

From
Campus Development
Office, UM

負責新校園相關的工作：

撰寫新校園設計任務書，規劃新校園建築物未來空間及資源的分配，規劃新校園的學習共享空間、開放實驗室及監督承建商的施工進度等。

New campus-related responsibilities:

Preparing design specifications, planning future allocation of space and resources on the new campus, planning the learning commons and the open laboratories, and monitoring the construction progress.



When Lila was assigned to the new campus project in 2009, Hengqin Island was still a deserted plantain plantation. Recalling how, over more than three years, all the parties concerned worked in unison to turn what seemed like an impossible dream into a reality, Lila jokes about those new campus buildings: "I was like a midwife helping to bring over 60 babies into this world."

Preparing design specifications for the more than 60 buildings, especially planning the purposes of each building, constituted

劉梨麗（Lila）從2009年開始參與新校園的籌備工作，她形容橫琴當時還是一片蕉林，遍地泥濘，荒無人煙。但過去三年多來，新校園大興土木，憑著全校上下的齊心努力，將許多不可能變為可能，新校園轉眼間就要投入運作。她笑言自己像一名產科醫生，「將60多幢大樓接生到這世界上來」。

她工作量最大的，就是撰寫設計任務書，規劃新校園60多幢建築物的用途。她說：「這是一個很難忘的經歷，讓我了解到原來是這樣的。」期間她要與澳大各部門代表洽談發展需要，亦要參與多場校政會議，收集澳大師生職員的意見。她表示，相關部門的工作都是根據設計任務書的數據來執行的，所以倍感壓力。由於工作量繁重，建設初期經常要在辦公室通宵達旦

the greatest part of Lila's work. "It was an unforgettable experience, which has taught me a lot of things," says Lila. In addition to preparing design specifications, she also needed to confer with representatives of the various departments of UM, participate in the Town Hall Meetings, and collect comments and suggestions from UM staff and students. The heavy workload was compounded by the need to carry out the work according to the requirements in the design specifications. In fact Lila was working to such a tight deadline she had to sleep in the office and give up holidays during the early days of the construction. But Lila says she wasn't alone in this race against time. "The top management, including Rector Wei Zhao and University Council Chair Dr. Tse, were all on the front line with us, which was very touching," says Lila.

Planning the learning commons, residential colleges, and the open research base was another challenge faced by Lila. She and her colleagues

趕工，過「沒有假期」的日子，但她說，辛勞的不單只自己，「還有趙偉校長、校董會主席謝志偉博士，他們也不辭勞苦與員工一起走在最前線，也蠻讓人感動的。」

Lila表示，另一具挑戰性的工作，是規劃學習共享空間、住宿式書院與開放式科研基地。由於澳門沒有相關經驗，因此她與同事走訪了許多世界著名學府觀摩學習。她先後到了香港、新加坡的大學參考學習共享空間的規劃，去台灣的大學考察園林式建築和吸取整體規劃的經驗，還到過美國耶魯、普林斯頓及英國牛津等大學參考住宿式書院的設計。她說：「對我來說，這是一個嶄新的經驗，可以到許多夢寐以求的大學參觀。」

過去三年多的拼搏日子中，雖然面對極大的工作壓力，但Lila反而把這些壓力視為學習動力，「可以參與新校園規劃，受益匪淺，畢竟，這麼大的工程，興建60多幢的建築，是很難得的經驗，有幸參與也感到很榮幸。」

visited many well-known universities around the world, including Hong Kong, Singapore, Taiwan, the United States, and the United Kingdom, to make up for the lack of local experience. "We even visited top universities like Yale, Princeton, and Oxford to draw on their experience in residential colleges," says Lila. "For me, this was an entirely new experience, being able to visit these top dream universities."

How did Lila manage to turn the enormous work pressure into motivation? "I kept reminding myself, 'It's a huge privilege to be a part of this new campus project, and I am going to benefit a lot from the process.' After all it's not every day that one has the opportunity to participate in a project that involves the construction of over 60 buildings," says Lila.

「參與新校園的建設真是千載難逢的機遇。」

"It's like a once-in-a-thousand-year opportunity."

李傳義
Li Chuanyi

所屬單位
澳大校園發展部

From
Campus Development
Office, UM

負責新校園相關的工作：

新校園公共市政工程的設計及圖則審核、包括市政道路、給水排水、強電弱電、排污系統及地下管網鋪設及相關協調。

New campus-related responsibilities:

Design and drawing review and approval for the public works of the new campus, including municipal roads, water supply and drainage systems, strong current and weak current systems, waste disposal systems, and underground piping systems.



Before joining UM in 2009, Li Chuanyi had participated in numerous large-scale infrastructure projects both at home and abroad, with more than 30 years of experience in project planning and construction management. He is currently the functional head of project management in the Construction Planning and Implementation Section, Campus Development Office. During the early phase of the new campus project, he was mainly involved in the public works, responsible for designing water, electricity and gas piping systems as well as reviewing and

擁有30多年工程策劃及建設管理經驗、曾參與多項國內外大型基建工程的李傳義於2009年起加入澳大團隊。早期主要參與策劃新校園的公共市政工程，例如水、電、氣等能源管網的設計及審核。到建設的中後期，主要參與地盤會議、監管各單項工程的進度以及執行狀況等。每週至少要到新校園視察四至五次的他，還要不斷和承建商及管理公司交涉，表達澳大在規劃建設上的意願。

回首過去三年多的工作，李傳義坦言土木工程建設並非高科技，整個項目中最具挑戰性的，並非建設層面，反而是與多方面的溝通和協調。新校區地理位置特殊，跨境工程衍生許多法律及管理難題，如在工程中遇到一個問題，得與多方開多達十數次的會議洽商解決辦法。

approving the relevant drawings. As the project progressed, he was mainly responsible for attending site meetings and monitoring the progress of the various sub-projects against the established schedules and standards. In addition to visiting the construction site at least four times a week, he also needed to liaise with the contractor and the management company on a frequent basis to relay UM's expectations and requirements as the user.

Li says civil engineering is not rocket science, and the greatest challenge doesn't lie in the technical aspect, but rather in the liaison and coordination with the various parties. The unique geographic location of the new campus has given rise to the need to follow two sets of laws and standards, as is often the case in many cross-border construction projects. Whenever a problem arose, a dozen meetings had to be held with the various parties concerned to find a solution. The need to follow the higher of the two sets of standards during the construction process was one of the factors that added to the

新校園內所有用料及工程都是按最高標準，即澳門方標準高就跟澳門，國內標準高就跟國內，這是增加工作難度的原因之一。若一旦發現施工有問題，澳大就以用家身份向南粵提出及時修改建議，這亦延長了工程的進度以及增加團隊的工作量。

由於新校園工程採用「邊設計邊施工」的運作模式，為李傳義及其團隊帶來巨大的工作量。從設計基礎方案、草則、正則、施工則，一次裝修到精裝修各個階段，涉及圖則多達十萬份。「在規劃設計階段，審圖工作量繁重，日夜趕工，連假期也要取消。」李傳義表示，新校園的設計是經過精心規劃的系統性設計，在國內外都比較少見到這樣一次性規劃建設的校園，而且採用現代化設備加上環保的概念，例如引入貫穿全校的再生水系統、湖水雨水淨化系統、防洪排澇系統、天然氣系統和太陽能熱水系統，屬澳門首次大規模採用的環保概念系統。

李傳義曾有超過30年的大學建設經歷，對大學建設工作有濃厚的感情，他認為「能夠參與新校園的建設真是千載難逢的機遇，感到非常榮幸，不但可以挑戰自己，還可以豐富職業生涯。」

difficulty. Another factor that caused an increase in construction time and workload was the necessary corrective feedback provided by UM as the user.

For the new campus project, design and construction went hand in hand, which considerably increased the workload for Li and his team. The process involved several stages (basic planning, draft drawings, formal drawings, working drawings, first decoration, and fine decoration) and hundreds of thousands of drawings. "During the planning and design phase, there were lots of drawings to review and approve," says Li. "We worked long hours, sometimes pulling all-nighters and cancelling holidays." Li says the design of the new campus was conducted in a systematic and well-thought-out manner. "It would be very difficult to find another campus in the world whose design and construction were completed in one fell swoop," says Li. "Not only does the new campus have advanced facilities, but many of these facilities are environmentally friendly. For example, the campus has the water recycling system, lake water purification system, rainwater harvesting system, flood prevention system, natural gas system, and solar power water heating system. It's the first time in Macao that environmentally-friendly systems have been used on such a large scale in a single project."

Having been involved in university construction projects for over 30 years, Li has grown especially fond of such projects. "Being able to participate in the construction of the campus is like a once-in-a-thousand-year opportunity, and I feel really honoured," says Li. "It has been wonderfully challenging, and it has enriched my professional experience."

「休息一下，繼續上路。」

"I hope to take some rest to prepare for the journey ahead."

許惠芳
Kinny Hoi

所屬單位
澳大校長辦公室

From
Rector's Office, UM

負責新校園相關的工作：
新校園項目的行政支援和協調

New campus-related responsibilities:
Providing administrative support and coordinating the efforts of various parties



Kinny works in the Rector's Office. She was among the first few UM colleagues to learn about the new campus project. "I remember it was 29 January 2009," says Kinny. "That night Vice Rector Alex Lai called to ask me to prepare a proposal about the new campus as soon as possible—said it was to be submitted to the government." After getting off the phone, Kinny rushed back to the campus and worked on the proposal until deep into the night. As she leaned back in her chair and stretched after completing the

任職校長辦公室的許惠芳，是澳大校內少數幾位最早知道新校園項目的職員之一，她記得那天是2009年1月29日，「那天晚上黎（日隆）副校打電話給我，說要馬上準備一份給政府的建議書，是關於澳大的新校園項目。」當晚，她匆匆趕回學校，幫忙起草文件，就此踏上一段從未經歷過的全新旅程。

作為新校園行政及支援項目主任，許惠芳主要負責新校園項目的行政支援和協調，「從最開始撰寫提交給政府的建議書，到後來開會的材料準備、文件整理，我均有參與。有時候校長看見我，會開玩笑地說我最清楚（新校園項目的）全過程。」隨著新校園項目逐漸落實，籌備工作也漸趨繁忙起來，「當時我們經常要與負責項目設計的廣州華南理工大學建築學院，在承建商位於珠海的辦公室開會。在大學管理層與設計師溝通的過程中，我負責相關的行政工作。後來等圖紙出來了，又要幫忙準備文件，轉發給校董會、校長室以及各相關部門，安排會議，以討論設計風格是否符合校方所提出的要求，再與建設發展辦公室不斷來回地溝通協調。」

work, she realised it was just the beginning of a long journey that would be at once challenging and exciting.

As the director-coordinator (administration and support for new campus project), Kinny was mainly responsible for providing administrative support and coordinating the efforts of various parties. "I was involved right from the beginning, from writing the first proposal to the government to preparing materials for meetings and sorting documents later on," says Kinny. "Sometimes when I ran into the rector, he would joke and say nobody knew the new campus project better than me." As the project progressed, Kinny's work became increasingly busy. "At that time we needed to meet with the South China University of Technology School of Architecture, which was responsible for the new campus design, in the contractor's office in Zhuhai on a regular basis," says Kinny. "And I was mainly responsible for providing administrative support to facilitate the communication between the university's top management and the design team. Later when the drawings were ready, I needed to prepare the relevant documents and forward them to the University Council, the Rector's Office, and various other units concerned, and I also needed to arrange meetings for those concerned to discuss whether the design style met the university's requirements and expectations, and after the meetings, I needed to liaise and coordinate with the Infrastructure Development Office of Macao SAR back and forth."

到後期的項目工程開展、校園搬遷等階段，許惠芳亦是主要聯絡人之一，負責協助副校長協調各工作小組的相關工作，「最近這一年，我主要協助趙校長、黎副校長跟進新校園整體協調，排相關部門人員開會，商討需要處理的各項工作。然後準備工作報告，向校內外不同部門定期匯報進展。」

許惠芳同時還兼任幾個相關委員會的秘書，她憶述最艱難的是剛開始的那段時間，「一來很多事還不熟悉，二來工作量非常繁重，要協調不同單位，又要配合校管理層的時間，還要兼顧各個項目的『死線』（Deadline），那時經常工作到凌晨兩、三點鐘。」繁忙工作之餘，她也抓緊時間進修，比如修讀採購課程。繁忙的工作，不但令她減少了陪伴家人和朋友的時間，就連身體健康也不時響起警號——因幾乎要無間斷地在電腦前工作，她曾因過度勞損而致雙手難以抬起，為此看過中西醫，不同醫生開的「藥方」幾乎一樣——多多休息。所幸努力有功，她對手頭的繁雜工作逐漸駕輕就熟，「這三、四年來，我不斷吸收經驗，現在很多和新校園有關的會議，需要準備些什麼材料、商討什麼議題、哪些地方要提醒管理層留意，我都大約心中有數，儘量自動自覺地預先做好。」

2004年加入澳大工作、本身畢業於澳大教育學院的許惠芳說，當初聽到澳大終於會有一座新校園的時候，內心倍感雀躍，「從當年在澳大讀書到現在，眼見大學的空間越來越不敷使用，我覺得新校園可創設一個更好的學習環境。」回想走過的數年歷程，許惠芳說，從四年前（2009年12月20日）的澳大橫琴校區奠基典禮，到最近（今年7月20日）新校園終於交付特區政府，有幸見證此一階段性飛躍，高興之餘，更是感觸良多。

如今這段旅程即將抵達終點，她內心又有何感受？「我的最大感受就是，澳大的同事們真的好厲害，面對這麼困難、大型的（新校園）項目，大家都盡力做到最好。過程中更互相支持、互相學習，很了不起。」展望未來，許惠芳希望等在新校園安頓下來之後，大家都可以好好休息一下，「衝了這麼些年，很多同事付出了很多，也是時候略作休息一下，檢視成果，總結經驗，然後再繼續上路。就像接受這次訪問，對我來說，也是一個很好的機會，梳理一下幾年來的感受。」休息，是為了走更長的路。對於即將遷入新校園，展開另一段精彩校園人生的澳大人來說，何嘗不亦如是？ ■

Later when the project entered the construction and relocation phases, Kinny was appointed one of the main contact persons, responsible for assisting Vice Rector Alex Lai in coordinating the work of the various task forces. "Over the past year, I've been mainly assisting Rector Wei Zhao and Vice Rector Alex Lai in coordinating the efforts of various parties. My responsibilities mainly include arranging meetings, preparing reports based on the discussions at the meetings, and reporting the progress to the internal and external stakeholders on a regular basis."

In addition to providing administrative support, Kinny has also served concurrently as the secretary on several new campus-related committees, which has not been easy, especially in the beginning. "It was hard because for one thing, I was new to the whole new campus business, and for another, the workload was extremely heavy. I needed to coordinate the efforts of various parties, to arrange everything around the schedules of the top management, because they too were very busy, and also to see to it that the deadlines were met. For a time, it became a norm for me to work in the office until two or three in the morning," recalls Kinny. She even managed to squeeze in a course in purchasing management. The heavy workload not only left her with almost no time for family and friends, but also gradually took a toll on her health. One day she sat down at her desk as usual, ready to begin the day's work, only to find that her hands refused to cooperate. Even lifting them required enormous effort. She went to one doctor after another, and both practitioners of western medicine and Chinese medicine made the same prescription—more rest. Luckily she gradually recovered, and her efforts paid off—work became easier with experience. "It's been four years now, and I've gained a lot of experience in the process," says Kinny. "Now in preparation for the many new campus-related meetings, I just know what kind of materials to prepare, what items will be on the agenda, and whether there is anything I need to remind the top management to pay special attention to."

Having experienced firsthand the inconveniences of a cramped campus over the years, first as a student in the Faculty of Education, and later as a staff member at UM since 2004, Kinny felt especially excited when she learned about the possibility of a new campus. And the four years that followed has been full of landmark moments and unforgettable memories—from the groundbreaking ceremony held on 20 December 2009 to the recent handover of the new campus (on 20 July 2013) to the Macao SAR government.

"The new campus project is coming to an end, and if you ask me how I feel—well, a lot of things. For starters, I feel tired and want to take a good rest," says Kinny with a laugh. "Of course I feel very honoured to be a part of this huge project. Everyone has been working so hard, and everyone is giving their best. It's very touching how people supported, learned from, and collaborated with one another under the enormous work pressure in order to accomplish a common goal. I hope that after we settle down on the new campus, I could take some rest, to review the progress I've made and the areas for improvement, and then pack away useful experience for the journey ahead. Actually this interview gives me a chance to do just that." ■

「就是一個字——忙。」

"One word sums it up: busy."

張惠琴
Katrina Cheong

所屬單位
澳大傳訊部

From
Communications Office, UM

負責新校園相關的工作：
統籌新校園項目的宣傳推廣及公關工作

New campus-related responsibilities:
Promotional and public relations work for the new campus project



For Katrina Cheong, director of the Communications Office (CO), what it feels like to be involved in the new campus project can be summed up in one word—"busy". Throughout the new campus project, from planning to construction to inauguration, CO was mainly responsible for internal and external communication, public relations, and promotion. "With the start of the project, my office began organising new campus visits, carrying out PR work, and holding consultation sessions," says Katrina. "At first there were a lot of voices of

對於澳門大學傳訊總監張惠琴來說，新校園項目帶給她的最大感觸，可以濃縮成一個字——「忙」，「基本上從這個項目一開始，我的部門就要負責不斷地帶人去參觀，還有開展相應公關工作、舉行相關諮詢會等等。」她透露，新校園從構思規劃到建設啟用的過程中，傳訊部主要負責相關的溝通、公關、宣傳與推廣工作，「剛開始外界有很多疑問和擔心，比如是否需要過關？能否使用澳門的網絡等，我們因此做了大量的文宣工作。不過，到現階段，師生對新校園的瞭解多了，更有不少讚美和期待。」

在橫琴建一座新校園的想法，引發了澳門社會高度關注，從2009年初到同年6月27日人大常委會通過相關法律的這段「真空期」，給張惠琴帶來了不少苦惱，「因為當時還未能對外公佈，所以，我們需要透過適當的渠道、採取適當的方式，將訊息帶給公眾。這段時期的工作

doubt and concern about various issues. For example, some asked, "Will we have to go through immigration clearance?" or "Will we be able to access the internet in the same way as we do in Macao?" In response to these questions, we carried out a series of promotional activities, and now our students and colleagues know much better about the new campus, and we are hearing more positive comments. A lot of people have expressed their eagerness to move to the new campus."

The idea of constructing a new campus on Hengqin Island has engaged the local populace ever since it was publicised. The period between early 2009, when the university learned the good news that the new campus would be approved, and 27 June 2009, when the National People's Congress Standing Committee officially approved the construction of the new campus, presented a tricky situation for Katrina. "We were not able to officially disclose the news, so we had to convey the message to the public through appropriate channels and in appropriate ways, which was enormously challenging," says Katrina. "Later we organised over 20 consultation sessions to explain the necessity of building a new campus on Hengqin Island. During the design phase, UM as the user wished to provide some input, and so we again organised a lot of consultation sessions."

有很大的挑戰，我們前後舉辦了20多場諮詢會向外界說明在橫琴建新校園的必要性。後來到規劃設計的階段，作為『用家』的澳大也希望能提供一些意見，所以我們又開展了很多的諮詢工作。」

2010年，新校園正式動工，傳訊部的工作重點轉向澳門社區和海外，「新校園不僅是澳大、澳門的事情，也希望吸引國際媒體關注，這對推廣澳門大學的形象，也是非常有益的。」之後兩年，新校園工程如火如荼興建，傳訊部開始轉為加強校內溝通的工作，比如不斷更新工程的最新進展，「務求令校內師生有參與感，而不是以為新校園只是學校管理層的事情。」這段時間，傳訊部要頻密接待訪客和師生前往新校園工地參觀，並負責相關設計、宣傳，以及協調各地媒體的採訪報導工作。這三年多的日子裡，張惠琴的工作日程塞得滿滿的，同事們也要經常加班加點工作，非常辛苦。但當親眼見證在短短三、四年之間，新校區從當年的一塊平地到今天的壯觀校園，「真的感到非常震撼，也感觸良多。」她笑言，「我兩個兒子也在新校園建設期間出生，他們在我肚子裡已見證新校園的誕生。」

而今展望充滿無限可能的未來，張惠琴又有何寄望？「新校園有新的硬件去配合大學、教育理念和政策，這令我們在宣傳推廣方面有更大發揮空間。大學制定的發展目標和策略也非常明確，我們也更容易配合校方政策開展工作。還有就是，從本地社區角度出發，大家都看見了我們的努力，我相信，大學日後會更容易獲得社區的認同，這一點是非常重要的。」

In 2010, when the construction of the new campus officially began, CO's focus shifted to the local community as well as overseas markets. "The importance of the new campus is not just confined to UM and Macao," says Katrina. "We also hope to arouse overseas interest because it would go a long way towards promoting our university internationally." In the following two years, as the construction progressed at full throttle, CO changed its focus yet again—this time to internal communication. "We regularly updated our colleagues and students on the latest progress of the new campus to make sure to involve everyone in the process. We didn't want our colleagues and students to just sit back and think that the new campus was something that only concerned the top management," says Katrina. During that period, CO frequently organised new campus visits for UM staff, students, and visitors, continued to carry out a series of design and promotional activities, and coordinated interviews by local and non-local media. Over the past three years, Katrina worked a jam-packed schedule, and her colleagues also worked a lot of overtime. But Katrina says watching a former plantain plantation transformed into a beautiful campus has made all the hard work worthwhile. "My two sons were born during that period. You know, those of us involved in the new campus project sometimes joked that we were like the midwives trying to bringing a new baby into this world. So it felt kind of special to give birth to two babies while the new campus was being built," says Katrina with a smile.

UM with a new campus is faced with a future full of new possibilities.

What hopes and expectations does Katrina have for the new campus? "The new campus has a much larger space and advanced facilities to support the university's efforts to carry out its educational philosophy and policies," says Katrina. "I think this will give us greater room for our promotional work. The university has also established very clear goals and strategies for achieving those goals. This will make it easier for us to carry out our work in line with them. Another thing that's noteworthy is that little by little our work has been recognised by the local community, and building on this foundation, I believe our university will gain greater recognition in the future, which is very important."



2009年，張惠琴組織媒體參觀新校區。
One of the many visits to the new campus organised by Katrina's office since 2009

「就是一個字一大。」

"If I had to use one word to describe the new campus, it would be big."

張愛華
Ella Cheong

所屬單位
澳大傳訊部

From
Communications Office, UM

負責新校園相關的工作：
拍攝新校園工程進展的照片和影片

New campus-related responsibilities:
Making photographs and videos about the construction progress



Ella works in the Communications Office. Her earliest memory of UM's new campus dates back to 27 June 2009, when the National People's Congress Standing Committee officially approved the construction of the campus on Hengqin Island. Shortly after that, Ella went on a site visit to Hengqin Island with some UM colleagues. "I remember it was a scorching summer day," recalls Ella. "Back then the new campus site was still a plantain plantation with no clear boundaries. I remember the area where I was standing was strewn with oyster shells. Actually I wasn't clear about the exact location of the future new campus. I took a picture, which later turned out to be useless because I was at the wrong location. So then we drove to another spot with the new campus site in the background."

在任職傳訊部的張愛華（Ella）的腦海裡，對於新校園的最早記憶，是在2009年6月27日人大常委會通過相關法律後、某次連同澳大相關人員前往橫琴考察，「記得那天又熱又曬，新校區選址還是一片蕉林，分不清界限。我記得自己站立的地方還有一大片蠔殼。當時其實我也不是很清楚新校園的具體位置，結果那張照片還拍錯了地方，後來要驅車前往另一處背景是新校園的地點再拍。」

新校園項目初步落實後，傳訊部已開始計劃用鏡頭記錄新校園逐漸成形的過程，「這段時間的新校園，變化必定日新月异，如果不馬上用鏡頭捕捉下來，過去了就沒有了。」新校園項目正式落實後，Ella便與上司張惠琴一起與學生尋找最適合拍攝的地點，甚至向經常到路環的行山者打探，「我們不停地找，路環天文台、威尼斯人和金都酒店的樓頂、媽祖廟、

After learning about the possibility of building a new campus on Hengqin Island, the Communications Office began contemplating the idea of documenting the construction progress with photographs and videos. "During the construction phase, the appearance of the new campus changes literally on a daily basis," says Ella. "And our wish was to capture those otherwise fleeting moments on camera as they happen." After the new campus project was officially approved, Ella and her superior Katrina immediately put the plan into action. Along with some student helpers, they searched high and low, even stopping casual hikers in Coloane to ask for advice, just in order to find a perfect photography location. "We looked everywhere, the rooftops of the observatory in Coloane, The Venetian, the Grand Waldo Hotel, the A-Ma Temple, the wastewater treatment plant in Coloane, even the Lotus Bridge," says Ella.

In the end they selected three spots, the training ground of the Academy of Public Security Forces, the A-Ma Temple, and the wastewater treatment plant in Coloane. "It was very hard," recalls Ella. "We went to many different spots. We

路環污水處理廠樓頂，甚至蓮花大橋的中央橋面，都試過了。」

最後她們在路環選擇了三處主要拍攝地點，分別是：保安高校飛虎隊訓練場的樓頂、路環媽祖廟和污水處理廠樓頂。「其實過程是非常艱辛的，因為要到不同的地方視察，整座山都跑遍了，就是為尋找一個適合架設相機拍攝的定點，期間也涉及很多協調工作，比如溝通聯絡、文件往來。」話雖如此，但最後總算找到合適地點，拍攝和錄影工作也順利開展了起來，讓她們內心滿懷欣慰。

剛開始的時候，Ella和一位學生助手負責拍攝和錄影工作。因早期新校園主要進行土地平整工作，故校區外觀變化並不大，大概每星期去路環和氹仔拍攝一次，每個月進入新校園工地拍攝一次，到後期才開始增加次數。「真的要感謝保安高校方面鼎力相助，他們不但允許我們在飛虎訓練場的樓頂設置攝影機盒，而且因為攝影機要靠人手運作，所以我們把鑰匙交給教官，於每週一和週三的固定時間，幫我們按快門拍攝照片，而我就於每週的固定拍攝日上回收回憶卡。」

回憶起那段日子，Ella說艱苦驚險的場面都有不少，「最驚險就是我們要爬那座飛虎隊訓練場的大樓，那樓房有七層樓高，樓頂周圍沒有圍欄，有畏高的我第一次爬上去時，心裡很害怕，完全不敢往下望，腿也嚇得一直抖震，很擔心會掉下去。還有一次坐車去媽祖廟拍攝地點時，司機開車很快，加上上山的路迂迴曲折，結果暈車。下車時我面色蒼白一片，幾乎站立不住，休息一會後，才能拿起沉重的攝影器材爬完長長的梯級上到廟頂拍攝。這些經驗很是難忘。」如是過了一年多之後，部門安排了專職同事承擔攝影和錄影工作，Ella也逐漸抽身。

問Ella參與新校區工作的最深感受，她說，「感覺就是一個字：大。望著偌大的新校園，有時都不知道從何拍起，從一端走到另一端也相當費勁，所以我每次都會著重拍攝一些新的變化為主。」然而，眼見新校區從一塊平地變成今天的校園，Ella說自己內心也難抑激動，「因為工作關係，這幾年自己訪問了不少參與新校區工程的相關人員，知道背後真的很辛苦，大家都為新校園做了很多工作，付出了很多。我能夠在一旁用圖片和文字記錄著這段歷史，看著新校園從無到有的轉變，好像和他們一起經歷整個階段，感受自然又更深一層。」

literally covered every inch of the hill, just to find the perfect spot to set up the cameras. There was a lot of coordination involved in the process too, liaising with the three places, correspondence back and forth, and so on. But we were very happy that our work paid off in the end.”

In the beginning, the new campus didn't change much from day to day because the early phase of the construction mainly involved land levelling. So Ella and a student helper made photographs and videos in Coloane and Taipa once a week and inside the construction site once every month. Only later did they increase the frequency of photography. “I can't thank the Academy of Public Security Forces enough for their support,” says Ella. “Not only did they allow us to set up the camera box on the rooftop of one of the buildings, but they also helped us press the shutter at fixed times on Mondays and Wednesdays because the camera needs to be operated manually. So we left the key with the drill masters, and went back on our weekly photography day to collect the memory card.”

For Ella, those days were not just hard; at times it was even heart-stopping. “The toughest part was climbing the seven-storey building in the academy,” recalls Ella. “I'm afraid of heights, and there were no railings around on the rooftop. The first time I climbed to the top, I was so scared my legs were shaking and I could barely look down, for fear of falling off to the ground. Another time I went to the A-Ma Temple to take pictures. The driver was driving very fast, and the ride up the hill was full of sharp bends, I got so carsick that when I got out of the car, I was pale as a ghost. I could hardly stand. Only after resting for quite a while did I manage to lift the heavy camera and climb the long stairs to the top of the temple. I will never forget those days.” Due to the lack of manpower, it was another year of enduring heart-stopping heights and getting carsick before Ella's responsibilities were taken over by her photographer colleagues.

If Ella had to use just one word to describe her feelings about the new campus, what would that word be? “Big!” says Ella. “It's so big that sometimes when I want to take pictures of it, I don't know where to start. Walking the length or the breadth of it is also no picnic. So every time I take pictures of the new campus, I focus on the new changes.” In spite of the many difficulties, watching a former plantain plantation gradually transformed into the beautiful new campus and capturing those precious moments on camera and in words along the way have filled Ella with excitement and joy. “My work has allowed me to interview many people involved in the [new campus] project. I know how hard they have worked and how much they have sacrificed for the new campus,” says Ella. “Unlike the buildings, what they did is not there for everyone to see, but their work has been every bit as important as that of the designer and the construction workers. And being personally involved in the process has given me a whole new understanding and appreciation of their work. They are the unsung heroes.”

「我都覺得好自豪。」

"I feel very proud."

鄭炳光

Cheang Peng Guong

所屬單位

文化視窗發展有限公司（外判商）

From

C-Vision Culture Development Co. Ltd.
(transport contractor)

負責新校園相關的工作：

專載澳大管理層及員工到新校園開會

New campus-related responsibilities:

Driving UM's top management and staff to the new campus for meetings



Over the past two years, Cheang has had numerous unforgettable experiences while driving UM's top management and staff to the new campus for meetings. Once he drove Gordon Song, director of the Campus Development Office, and his colleagues to Hengqin, where they had a meeting until almost midnight. Knowing that it was already past the office hours of the Hengqin Border, which closes at eight, he decided to try Gongbei instead. They arrived with just a few minutes to spare, narrowly escaping having to stay a night

工作兩年多來，有很多難忘的回憶，試過載校園發展部總監宋傑堯和其他同事去新校園開會至差不多半夜，早已錯過橫琴口岸關門的鐘數（晚上8時），只好迅速趕去拱北，抵達關口時差不多12時，好險！差點就要留在拱北過夜。另外，也試過車子駛進新校園的浮沙裡面，整部車陷入淤泥裡，最後要出動南粵方面急召吊車來，花了兩個小時，才把車吊起去清洗。望著成身黃泥的新車，真是有點無奈，不過，當時自己最擔心的，還是怕因此誤了下一個任務。

在澳大工作以來，鄭炳光說，最大的感受是認識了很多，大家都很好聊。所有現任學院院長第一次去參觀新校園，都是我接送他們的。這兩年，澳大不少人來來往往，但通常第一次到新校園，大家都會說一句「好大，好壯觀」。能夠參與新校園的工作，我都覺得好自豪，以後我一定會帶太太和子女來看一看，感受一下新校園的環境。 ■

in Zhuhai. Another time, his car got stuck in the mud on the new campus, and it took two hours and a crane called by the contractor to lift it out of the mud. For a split second after he saw the rescued new car encased in mud, he couldn't help but imagine the expression of the person he was going to pick up when he saw this mess, but enough time had been wasted, so he had to press on.

Cheang says that he has met a lot of people working at UM, and he has always enjoyed talking to them. "You know what? All the faculty deans—their first visits to the new campus were in my car," says Cheang. "I've driven many people to the new campus, and the first thing they usually said after they saw the new campus for the first time was, Wow, it's very big and impressive. I feel very proud to be a part of the new campus project. I will certainly take my wife and children to the new campus some day to have a look." ■



「澳門史上最大規模、最艱鉅的圖書館大搬家！」

“There has never been any larger-scale library relocation in Macao’s history!”

王國強
Raymond Wong

所屬單位
澳大大學圖書館
From
University Library, UM

負責新校園相關的工作：
統籌圖書館的採購、搬遷、規劃和佈局。

New campus-related responsibilities:
Coordinating the procurement of library supplies and relocation of the books, as well as coordinating the planning and layout of the library on the new campus.



“There has never been any larger-scale library relocation in Macao’s history,” says Raymond, UM’s assistant librarian. Over the past three years, Raymond and his colleagues spent a lot of time and energy preparing for the relocation of the library, which will take place in two stages.

The first stage will be devoted to moving the most urgently-needed books, back numbers, as well as books from closed stacks and rarely used stacks. Ancient books and old newspapers that are not urgently needed will be moved during the second stage. Raymond says that he and his colleagues foresee a lot of challenges in the relocation process. “The library currently houses an astounding number of collections, including

「這次可說是澳門歷史上最大規模、最艱鉅的圖書館大搬家！」圖書館副館長王國強（Raymond）說，過去三年，他與同事花了大量時間和精力籌備圖書館的搬遷工作，彼此同力合作。

圖書館搬遷行動將分兩階段：第一階段主要搬師生和讀者最急需的書籍，以及閉架書、舊期刊和罕用書庫的書；第二階段主要搬遷師生並不急用的古籍和舊報紙。Raymond表示，這麼龐大的搬遷行動，過程中必然會面對不少挑戰。

「目前，具編目的館藏書庫約50萬冊，不在編目內的書籍也有約15萬冊，加上無以計數的期刊和舊報紙，數量相當驚人。這次合共大概要搬四萬箱物件。由於現館的藏書區只有一個樓層，但新校園圖書館的藏書區卻有四個樓層，最大難度是如何將一個樓層的圖書分進四個樓層，故此在裝箱前就要準確計算出平均每一樓層可容納多少冊書，還要準確計算並預留每個藏書區日後擴展的空間。另外，由於現館的書

about 500,000 copies of catalogued books, 150,000 copies of non-catalogued books, as well as innumerable journals and old newspapers,” explains Raymond. “We will need to move about 40,000 boxes of items, and unlike the current library, in which only one floor is used as the stacks area, the library on the new campus will have four floors dedicated to that purpose, and this presents a big challenge for us—how do we re-arrange the books from one floor into the four floors? Before packing we need to accurately calculate the average capacity of each floor while also making allowance, as accurately as possible, for future expansion of the stacks areas. The fact that the current book stacks have seven levels while those on the new campus will only have six further adds to the difficulty in estimating.”

The shortage of workers was what worried Raymond the most in the beginning. Later the university assured Raymond and his colleagues that a moving company would be hired to help with the move, lifting a huge load off Raymond’s mind. Raymond says the process of planning the move was an experience he will never forget. “At first we had no way of knowing the exact layout of the new library. All we could do was look at the design drawings and try to imagine how we were going to divide the not-yet-built library into

架是七層，而新校園的書架是六層，這亦會增加我們工作的難度。」

起初Raymond最擔心人手問題，當後來校方表示會全力支持圖書館找外判搬運公司合作處理，Raymond頓時放下心頭大石。回想由籌備到搬遷的過程，Raymond說最難忘是規劃搬遷的階段，「初期我們對新館的佈局完全不掌握，只憑圖則去想像將來如何分區、如何按區擺放書架，因此花了很多功夫去計算新館的容量和體積，但估算出來的結果與實際又會少少差距，令工作大大增加難度。」新館整個佈局的計算，都由Raymond一手一腳完成，「現館內有160種不同的館藏，將來如何分區和佈置？這就好比下棋一樣，計算時的思維一定要連貫，不能錯配，因此由一人獨力完成會更好。」Raymond在圖書館工作了20多年，對圖書館裡每一物件的擺放位置都瞭若指掌，這份工作也確實非他莫屬。

圖書館因搬家而需休館多久？被視為圖書館能力的最佳考驗。慶幸澳大圖書館曾有過一次大規模搬遷，而那次的經驗，這次就可派上用場。Raymond說：「1999年由何賢中心的圖書館搬至現館，那時館藏圖書約14萬冊，前後花了三個月時間籌備，兩週內完成搬書。儘管目前藏書量比之前增加了三倍多，但因有了上次的經驗，我們有信心在三週內完成搬書工作。」圖書館亦會將一些零散特藏書籍交由學生負責，讓學生學習如何組織搬遷工作，作為課外教育的好機會。

現在圖書館內大約有130排書架、總長約10公里的圖書，約等於兩條澳門友誼大橋的長度，搬入新館後，還將增加約一倍的書架數量，而現有書架將用於新校區圖書館的擴展區域，以及改裝成新的密集式書架。而在遷館期間，師生讀者仍可繼續使用電子圖書館的網上系統查閱資料或檢索論文。Raymond說，圖書館電子資料庫系統將僅在搬館的最後一天才關閉，然後將伺服器搬至新校園後，系統亦會於翌日重新啟動。

對於新圖書館的未來發展，Raymond充滿期待：新館面積有32,000平方米，實用面積18,000平方米，可容納圖書約100萬冊，料可足夠應付未來三至五年的擴展。但隨著書籍的增長，書庫始終也會飽和，「圖書館未來將會朝電子書和密集式書庫相結合的方向發展，會發展成全澳最大的電動密集式書架展示區，新館日後也會提供更多服務，繼續與澳門社區共享資源。」

different sections and how we were going to put the book stacks in the different sections,” says Raymond. “So we spent a lot of time estimating the volume and capacity of the new library, but inevitably there was some gap between our estimates and the actual figures, which added to the difficulty.” The calculation was done by Raymond alone. “We have 160 different kinds of collections in our current library, and how we divide the new library into different sections so as to achieve the most efficient layout is kind of like playing chess, which requires you to think many steps ahead and allows no misjudgment. And I thought we stood a better chance of achieving that if the calculation was done by one person,” explains Raymond. Indeed, who was more suited to the job than Raymond, who has been working at the library for more than 20 years and is unsurpassed in his familiarity with the location of every object in the library?

How long the library would remain closed due to the relocation was not just a question on many people's minds, but it was considered a test of the library's ability to complete the relocation without causing undue inconvenience to the users. Luckily for Raymond and his colleagues, there is prior experience to draw on. “When the library moved from the Ho Yin Centre to its current location in 1999, there were about 140,000 books, and it took three months to prepare and two weeks to complete the relocation,” says Raymond. “Now we have three times more books, but with the experience from the previous relocation, we are confident that we can complete the relocation within three weeks.” The library will entrust the relocation of some odd volumes of special collection books to the students, as part of UM's efforts to carry out education outside the classroom to help students acquire soft skills.

The library currently has approximately 130 rows of book stacks, with a total length of 10 kilometres, equivalent to the length of two Macao Friendship Bridges joined together. The number of book stacks will double after the library moves to the new campus. Some of the current book stacks will be converted into compact book stacks and others will stand by for future use. During the relocation period, students, faculty members, and administrative staff will still be able to access the online database. “The library's e-database will only be closed on the last day of the library's move so the server can be moved to the new campus, and the system will be re-opened on the new campus the next day,” says Raymond.

With a floor area of 32,000 square metres and a usable area of 18,000 square metres, the new library will have the capacity to house approximately 1 million copies of books, which should be able to accommodate the ever-growing collections, at least for the next three to five years. But even the largest library in the world cannot handle the ballooning collections indefinitely without the help of modern technologies. “I think in the future we will introduce more ebooks and compact shelving,” says Raymond. “In fact, I think in the future our new library will have the largest electronic shelving system in Macao, and we are also going to launch more services and continue to share our resources with the community.”

「每一天都過得特別快。」

"I feel like every day is just whizzing by."

林亮雄
Lam

所屬單位
澳大健康科學學院

From
Faculty of Health
Sciences, UM

負責新校園相關的工作：

統籌科技學院實驗室的採購、搬遷、規劃和佈局。

New campus-related responsibilities:

Coordinating the procurement of laboratory supplies, the relocation of the current laboratories, as well as the planning of the layout of the laboratories on the new campus.



Lam received his bachelor's and master's degrees from UM's Department of Civil and Environmental Engineering. Having worked in the Faculty of Science and Technology (FST) since 1995, he is very familiar with the faculty and various laboratories. Now he has been transferred to work in the Faculty of Health Sciences, but he continues to be involved in the relocation of FST's 58 laboratories. Lam and his colleagues began preparing for the relocation three years ago when they learned the university's plan to move to the new campus. With the support of the dean and his superior as well as the assistance of a consulting firm, Lam and his colleagues devised a meticulous relocation plan.

林亮雄是澳大土木及環境工程系學士和碩士畢業生，他於1995年加入科技學院，對學院和實驗室的工作十分熟悉。現時他剛被調至健康科學學院工作，同時也繼續處理科技學院實驗室的大規模搬遷工作。三年前，當獲悉要搬往橫琴新校園後，林亮雄在院長和上司的支持下，與同事馬上著手規劃和準備實驗室的搬遷工作，並在顧問公司協助下，制定了一套細緻的搬遷方案，為迎接複雜的搬遷工作做好準備。

林亮雄坦言，搬遷實驗室最困難的地方，主要是人手不足，「平均每一個實驗室技術員負責搬2.6個實驗室，人手確實很緊張」。其次是精密儀器和重型實驗儀器的搬動也非常困難。

「科技學院共有58個實驗室，總共有6,200多件儀器，將需要約26個不同供應商負責拆卸、搬動、重新安裝及調校，當中涉及特殊搬運採購項目就有50項，相關協調工作非常繁複。一些較大型的重型儀器還需出動吊車處理，所幸新

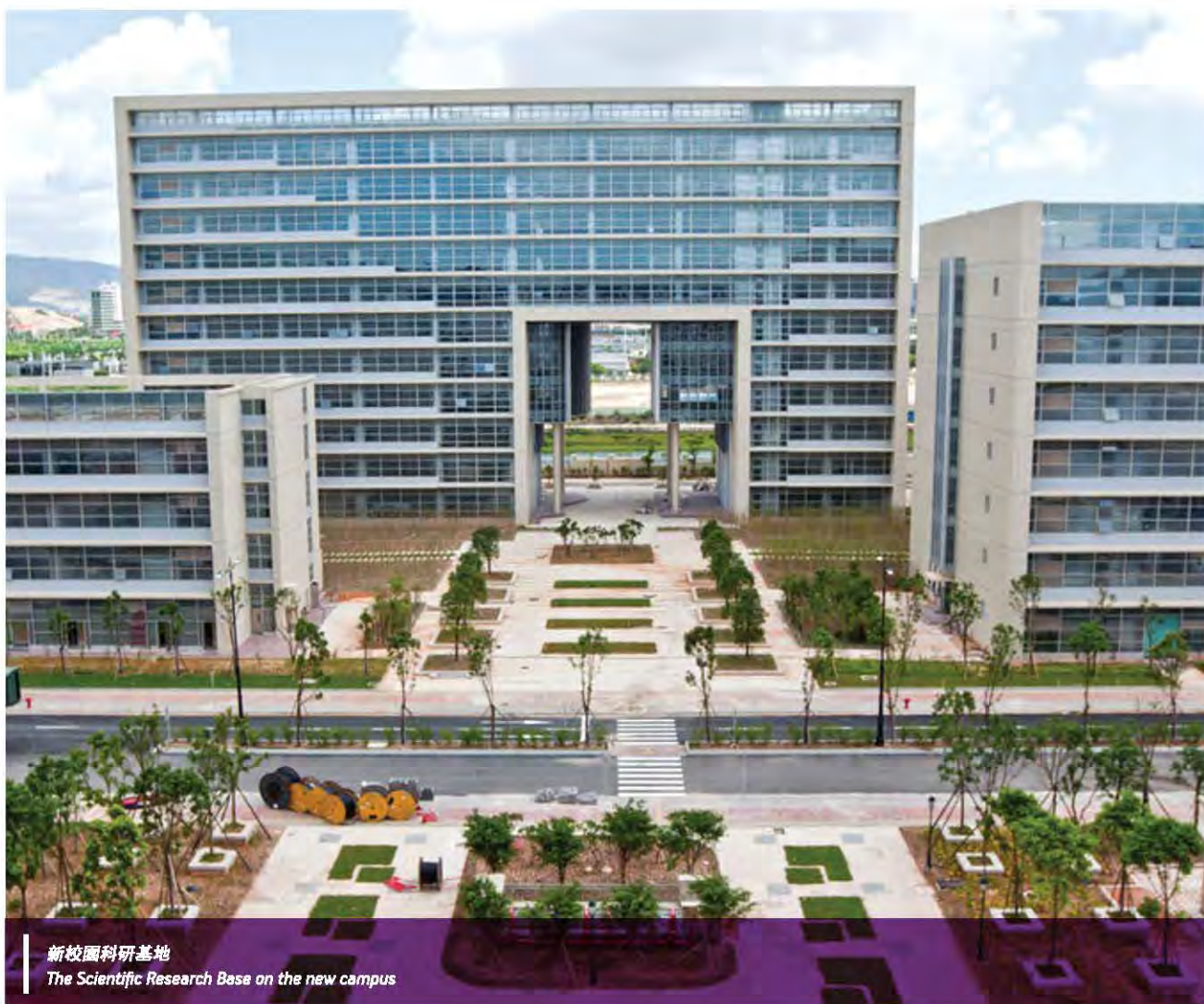
Lam says that the greatest challenge is the lack of workers. "On average, every lab technician needs to take care of 2.6 labs," says Lam. Another challenge lies in the relocation of precision instruments and heavy-duty equipment. "We have 58 labs and over 6,200 lab devices, which will require about 26 suppliers to dismantle, move, re-assemble and re-calibrate," explains Lam. "50 items have special requirements for moving and procurement, which involves a lot of coordination. Some large, heavy instruments will need to be moved with cranes. Luckily, some of FST's labs on the new campus are on the ground floor, which will save some trouble of lifting the heavy instruments upstairs."

In addition to new campus-related responsibilities, Lam also needs to handle a large amount of administrative work, inspect some of the laboratories on a regular basis to ensure compliance with the relevant safety standards (because he concurrently serves as the lab safety officer), arrange leakage prevention drills, and provide pre-class safety trainings for new students. With such a busy schedule, Lam feels like every day whizzes by. "I wish there were 36 hours in a day," Lam jokes.

校園在規劃設計時，一些配置較大型設備的實驗室設於科技學院大樓地面層，因此可省去部份吊重型機械上樓的程序。」

林亮雄的日常工作的非常忙碌，「每天都過得特別快，時間很不夠用」。除了負責統籌實驗室採購、搬遷、規劃和佈局工作外，他還要處理大量的行政工作，並兼任實驗室安全主任一職，負責定期巡視部份實驗室是否符合安全標準、安排預防洩漏的演習，以及為新生做實驗課前安全培訓等。雖然工作任務繁重，但他儘量在忙碌中尋求工作的樂趣。「能夠參與這麼大規模的搬遷計劃，機會十分難得。而且新校園提高了工作的積極性，即使工作量大，只要事前做好規劃，加上同事之間的默契和配合，工作至今一直十分順利。過程中，自己亦學習到很多新東西，對個人能力也有所提升，獲益良多。」 ■

“Incredibly busy yes, but at the same time I feel very honoured to be a part of this big relocation project. Our excitement about the new campus has been the greatest motivation. And I feel very lucky to be able to work with a bunch of very competent colleagues who not only support but also really understand one another. Sometimes we don't even need to speak—a look, a nod, a frown, and we immediately know what the other is thinking. This kind of rapport has made our work very smooth and great fun. And I myself have learned a lot from the process.” ■



新校園科研基地
The Scientific Research Base on the new campus

「相信這項重大任務可以順利完成。」

"We believe we can accomplish this task successfully."

石國英
Stanley Seak

所屬單位
澳大資訊及通訊科技部

From
Information and Communication
Technology Office, UM

負責新校園相關的工作：
網絡設計規劃、電話系統、無線網系統的籌劃及搬遷。

New campus-related responsibilities:
Network design and planning, as well as planning and relocation
of telephone and wireless systems.



Stanley was mainly responsible for the infrastructure aspect of the campus network. He and his colleagues started the design and planning of the campus network after the new campus proposal was approved. They went through the design drawings of all the buildings to try to identify the best locations for the more than 560 network equipment rooms. They also needed to design the routes for optical fibre cables and campus network cables. "To make an optimum plan, we met with the designer regularly at the beginning to discuss how we wanted to design the campus network for each building as well as the network for managing campus facilities," says Stanley.

石國英（Stanley）主要負責校園網絡的基建部分，他與整個小組在新校園方案獲批後，已著手籌備和規劃新校園的網絡設計工作，他們當時要看遍新校園所有的建築設計圖，同時根據將來的規模要求，尋找網絡設備房的最適合位置，為新校園設計光纖線路及網絡線路，新校園的設備房已多達560間。「初時，我們要不斷與設計師開會商量，逐一為每一棟建築物設計校園網絡，其中包括師生使用的校園網絡，及為管理校園設備所使用的設施管理網絡，最終才確定一個可提升校園網絡運作的最佳設計方案。」

方案確定好之後，接下來他們開始進行研究和分析，尋找最佳及最先進的網絡設備規格，並提交規格要求給承建商選購最合適的產品。另一方面，畢竟澳門很少有像新校園那麼大規模的有線及無線網絡，日後如何管理及提升也是一項挑戰，因此Stanley和其團隊四出參訪外地高校，汲取經驗。

After they decided on the best plan, Stanley and his colleagues set out to prepare specifications for network equipment and submitted the specifications to the contractor in order for it to purchase the most suitable products. Foreseeing the future challenges of managing and upgrading the wired and wireless networks on the new campus, on a scale Macao has rarely seen, Stanley and his colleagues visited many universities around the world, hoping to gain more experience.

But the preparatory work was not the hardest. The real challenge came after the new campus was handed over to UM. That was when they needed to implement step by step the plans they had made during the previous three years, including testing the networks, relocating internet service, installing the wireless network and telephone system, and so on. "Every member of our team has different skill sets which perfectly complement those of the other members," says Stanley. "After more than three years of preparation, we believe we can accomplish this task successfully."

對於Stanley和他的小組而言，前期工作還不算艱辛，等新校園交付澳大後，他們才開始面對真正的挑戰——將三年來的準備付諸實行，包括：按部就班的網絡調試，互聯網服務搬遷以至無線網，電話系統具體的安裝工程等。Stanley表示：「團隊裡每個人都各有所長，經過三年多的籌備，我們相信這項重大任務可以順利完成。」

Stanley透露，新校園將是個先進的「智能校園」，整個校園網絡分成17區域，每個區域都設有兩個獨立網絡，一個專門管理校園設備，如：門禁系統及安防系統，為大學設施提供智能化的基礎建設；另一個是給大學教職員及學生使用的校園網絡，17區透過10G萬兆乙太網連接，以滿足教學發展對主幹頻寬的需求。引入先進的IP電話通訊設備，讓電話網絡更加完善。至於無線網絡方面，Stanley表示，新校園將會先設約3,800個無線接入點，主要分佈於學生宿舍、學生活動中心、教室和會議室，方便老師教學和學生的學習。 ■

Stanley says that the new campus will be a smart campus divided into 17 sections. Each section will have two independent networks, one for managing campus facilities such as access control systems and security systems, and the other for students, faculty members and administrative staff to use. The 17 sections will be connected via a 10Gb Ethernet. Advanced IP telephone system will also be adopted. As for the wireless network, Stanley discloses that the new campus will have approximately 3,800 wireless access points (WAP), the number of which could increase in the future should the need arise. These WAPs will be located in student dormitories, the Student Activity Centre, classrooms, and conference rooms, for the convenience of teachers and students. ■



石國英及其小組在新校園臨時辦公室
Stanley and his colleagues in a temporary office on the new campus

湯柏樂： 走進書院的音樂家

Lead the College like a Musician
Interview with
Prof. Kevin Thompson

文 | 鄧曉炯
圖 | 譚金榮，部分由受訪者提供

Text | Joe Tang
Photo | Eric Tam, with some provided by the interviewee

因家人有遺傳性聽力障礙，故在湯柏樂（Kevin Thompson）記憶中，童年的家裡永遠是一片寂靜，因此他對聲音特別敏感——湯柏樂形容第一次聽到音樂的那刻，「不啻於一種啟示！就像一個看慣黑白電視的人，某天按下開關，突然之間被一千尺的360度全景彩色超大屏幕所包圍。」

尋找工作 and 生活的平衡

自從那次與音樂的難忘邂逅之後，湯柏樂從此全身投入音樂的世界——學吹小號、學作曲、指揮，獲獎學金參加巴黎的皮埃爾特博大師班、美國的布列茲大師班，1983年取得博士學位。轉投行政領域後，他於英國兩所傑出的藝術學院擔當「旗手」：1988年，以年僅34歲之齡應邀出任伯明翰音樂學院校長、1993年出任達丁頓藝術學院校長，兩校在他帶領下成為英國出色的音樂及創意教育中心，達丁頓藝術學院更於2003年被英格蘭藝術委員會嘉許為「卓越」學校。2004年，湯教授遠涉重洋來港出任香港演藝學院校長；期間更曾於2011年獲英女皇頒授大英帝國官佐勳章、2012年獲法國藝術暨文學騎士勳章。今年7月，他應邀加入澳大，擔任滿珍紀念書院院長，與澳大人一起踏上一段全新旅程……

湯教授說，新校園交接的畫面在他腦海烙下難忘的歷史瞬間：當車隊首次通過河底隧道，大家齊聲歡呼雀躍。他回憶2004年和妻子首次踏足澳門，為小城豐富多元的文化而驚訝，此前，W. H. Auden寫於1938年的詩章、弗萊明1959年出版的小說，曾在湯柏樂心頭投下「澳門」這遙遠東方小城的神秘身影，如今踏足，更為其溫馨人情所感動，「我和太太發現，澳門是個充滿人性關懷的社會。這裡幾乎每個公園裡都有



"I grew up in quite a silent household with hereditary hearing impairment in my familial genes. When I heard music for the first time, it was an unalloyed revelation and left an indelible impression. It was like someone accustomed to viewing black-and-white television flicking a switch and suddenly seeing a thousand-foot technicolour cyclorama wrapped around them," recalls Prof. Kevin (Kit) Thompson, an eminent musician and newly-appointed college master at UM, about his unforgettable initial introduction to music.

"Macao is a city of work and leisure."

After that first unforgettable experience with music in his childhood, Kit threw himself wholeheartedly into the world of music and has never looked back. He studied trumpet and composition, and subsequently conducting. He was awarded scholarships for master classes, with Pierre Thibaud in Paris, and Pierre Boulez in the United States. In 1983 he received his PhD degree in music. In 1988, when he was only 34, he became the founding principal of the Birmingham Conservatoire, and in 1993 the director of the Dartington College of Arts. Under his leadership, the two institutions became excellent centres for music and creative arts in the United Kingdom. In 2003, the Dartington College of Arts was designated by the Arts

供老年人做運動的器械設備，這（設計）真的很貼心，可見澳門是個尊重長者的社會。有人曾經說過，忘記珍惜長者，就等於忘記我們來自哪裡，去向何方。澳門是個關愛長者的社會。這裡的人普遍都非常禮貌，非常善良。」在澳門，閒時他喜歡和太太四出探索，畫廊、博物館、音樂廳……溫文爾雅的湯柏樂，說起話來慢條斯理，不見港式的風風火火，倒有幾分契合澳門式的閒適輕鬆，「在香港，工作節奏非常繁忙，但來到澳門，卻能在工作和生活之間找到平衡。」

「學生認同，就是一枚掛在胸口的金獎章！」

湯柏樂回憶，成長路上，有位啟蒙老師對自己影響至深——音樂女教師湯臣博士引導他探索神奇的音樂世界，循循善誘，無微不至，兩人師生情份延續不斷，至今仍互有往來，「我永遠也忘不了早年所受的慷慨幫助，學校的導師、教授等等，對我的人生發揮了決定性的影響。所以學習不但是傳授知識，更重要的，是分享人生經驗。」這正是湯教授投身教育事業後，永遠都將「學生」置於工作重心的原因。

在湯教授眼中，中國學生是非常努力的一群，但面對複雜多變的世界，只有努力還不夠，「比如說，中國內地有數據統計的鋼琴演奏者就超過三千萬！而那些自學的或者業餘的鋼琴演奏者，可能也超過了三千萬，而且他們一樣可能很有才華和潛力。再說小提琴，中國的小提琴演奏者超過一千萬！要從中出頭，你可以想像競爭有多麼激烈。」他認為，面對變幻莫測的未來，每個學生都必須擁有不斷「重塑」自我的能力，「我們每個人都必須不斷重塑自己，正所謂磨刀不誤砍柴工，我們要經常打磨自己的知識和能力，這樣才能不斷的邁向更大的成功。以我自己為例，我就從沒想到自己這個小號手，後來會去管理大型國際藝術機構。」



Patricia Thompson博士與湯教授2012年在澳門氹仔
Dr. Patricia Thompson and Prof. Kevin Thompson in
Taipa, Macao, in 2012.

“我們每個人都必須不斷重塑自己，正所謂磨刀不誤砍柴工，我們要經常打磨自己的知識和能力，這樣才能不斷的邁向更大的成功。”

Every one of us has to constantly re-engineer ourselves, to re-sharpen the saw regularly if we are to succeed and continue to do so in the future.

Council England as a new national centre of excellence. In 2004 he was appointed director of the Hong Kong Academy for Performing Arts. In recognition of his services to the arts and cultural exchanges, he was made an Officer of the Order of the British Empire (OBE) in the Queen's New Year Honours List 2011 and a French Knight, Officier dans l'Ordre des Arts et des Lettres in 2012. In July 2013 he acceded to UM's appointment as master of the Moon Chun Memorial College.

Only several months in his new position, Prof. Thompson says Macao and UM have already left a deep impression on him, especially the moment when everyone burst

into a spontaneous cheer and applause as the bus passed through the underwater tunnel towards the new campus after it came under the jurisdiction of Macao SAR. Recalling his first visit to Macao with his wife in 2004, Prof. Thompson says that even before he came, he had already known Macao from a 1938 poem by W. H. Auden, and a 1959 piece by Ian Fleming. Now that he's back he is impressed by the cultural richness and diversity of Macao, as well as the overwhelming kindness and consideration of the people here. "My wife and I have discovered a genuine concern for people of all kinds, all ages and all walks of life. In practically every park there is a place where elderly people can exercise, which is fantastic," Prof. Thompson enthuses. "Someone once said, when societies forget to cherish the elderly they have forgotten whence they came and whither they go. Macao seems to care. We have found truly remarkable politeness and widespread kindness. It's a kind place. Hong Kong is a great city of work. Macao is a city of work and leisure. There is some balance and a sense of equilibrium in the lifestyle of the people here. My wife and I like to go to the galleries, museums and concerts in here." Gentle and soft-

spoken, Prof. Thompson doesn't resemble someone who has lived in Hong Kong for a long time, but rather someone who feels at one with the more relaxed and laid-back way of life in Macao.

"Teacher is a badge which I wear with pride"

Prof. Thompson is grateful that when he discovered music, he had a very charismatic music teacher Ms. Thomson, who took him under her wing and with whom he still keeps in touch even today. "I've never forgotten the early influence of some truly unstinting people, schoolmasters, and later academics being not only enormously kind but so generously putting high-quality formative experiences, and, unknowingly at the time, those which were to prove defining and decisive moments in life, in my way," says Prof. Thompson. "And I think that's why I'm so passionate about students being at the very centre of all we do and strive for in our work."

In his eyes, Chinese students are extremely hard-working and motivated. He feels that in addition to hard work, the ability to constantly re-invent oneself is also an important tool all students need to master, especially in view of the fast-changing



湯教授獲頒「法國藝術暨文學騎士勳章」後與法國駐港澳總領事M. Arnaud Barthélémy先生以及中國會創始人鄧永鏞爵士合照
(From left) M. Arnaud Barthélémy, consul general of France in Hong Kong and Macau; Chevalier à Officier Kevin Thompson; and Sir David Tang KBE, founder of the China Clubs, at the French Knighthood Ceremony.

剛剛上任，湯教授就像是一位準備就緒彈奏新曲的音樂家，「首先，我們要盡我們最大努力為學生創造機會去參加各種活動，讓他們獲得受益終身的經驗。我們對學生要有現實的期望，然後提供空間給學生去超越這些期望。授人以魚，不如授人以漁，我們要給學生工具，讓他們可以獨立取得成就的同時，又能在與他人的相處互動中得到提升。我們每個人的一生都是在他人的陪伴中度過的，娛樂，交談，學習……三人行，必有我師，『他人』是幫助我們成長極其寶貴的資源，而大學，特別是住宿式書院，提供了大量的機會給師生去利用這個資源，因為每天和我們擦身而過的人當中很多都是聰明又有才華的。其次，我們還要為學生們提供學習工具，幫助他們活出充實、有意義的人生。」

任職達丁頓藝術學院校長期間，學生對自己直呼其名，湯教授卻毫不介意，「藝術面前人人平等。我並不那麼看重『教授』的頭銜，因為學生不管你是誰、也不管你的資歷有多厲害，他們在乎的是：你行嗎？你瞭解我嗎？懂我嗎？你是否能教給我有用的東西？所以，到最後，只要學生認同我是他們的老師，那對我來說，就是

world we are in. "Take the music world for instance," he explains. "In mainland China, there are some 30 million pianists that we know of, and there's probably another 30 million, albeit amateur and self-taught, some with no less innate talent and potential, perhaps, that we don't know about. There are some 10 million violinists, so one can just imagine how intense and unparalleled the competition must be. Every one of us has to constantly re-engineer ourselves, to re-sharpen the saw regularly if we are to succeed and continue to do so in the future. I could not have conceived for a moment that, as an orchestral trumpet player, I would find myself running major international institutions."

To coax a truly memorable performance from an orchestra a conductor needs to first coach, to give something quite extraordinary to the orchestra. In turn they return the favour. So what does Prof. Thompson wish to give to his students as a college master in order to help them achieve full potential? "First of all, we strive to enable and deliver - where we can - some truly life-changing experiences to students, key formative moments, realistic expectations, whilst leaving room for those expectations to be exceeded. We provide tools by which students can accomplish something for themselves but in and enhanced by the presence of others. One plays, one acts, one speaks and one learns in the company of others. One's life is spent in the company of those around us. What a tremendous resource that community proves to be, one made all the richer in a university and residential college environment where we rub shoulders with some of the brightest and most talented on a daily basis. And secondly, we have to provide tools by which students can live lives which are rich and meaningful."

一枚掛在胸口的金獎章了！」湯教授引用莎士比亞《亨利五世》中英王亨利的金句「我們幾個，少數的幸運兒，一班兄弟。」，形容自己非常珍惜這次出任澳大書院院長的難得機會，且讓我們拭目以待，看他如何為一批批進入書院的「兄弟姊妹們」，開創更豐盛的人生。 ■

Prof. Thompson says he isn't hung up on the title of "professor" and when he was at Dartington, students called him by his first name, which he didn't mind. "The arts are great levellers. I don't get hung up on the title of professor, because students don't care who you are, or how many qualifications you have," he says. "What they care about is 'Can you do it'? Not in a Nike ad swoosh sense: 'Just do it' but can you relate to me?' 'Can we learn something together that's worthwhile?' So when someone asks me if I am a teacher, I say yeah, and it's a badge which I wear with pride. I am reminded of those lines from the St Crispin's Day Speech in Shakespeare's *Henry V*. 'We few, we happy few, we band of brothers.' We are, indeed, a lucky few to be able to enable students - brothers and sisters - to shape rich and rewarding lives." ■



香港演藝學院伯大尼古蹟校園復修工程獲頒2008年聯合國教育、科學及文化組織亞太區的文物古蹟保護獎項，湯教授（右二）、Anna Sohmén與一眾同事合影留念。
Prof. Kevin Thompson, (2nd from right), Anna Sohmén and colleagues at the Hong Kong Academy for Performing Arts' UNESCO heritage Bethanis.

湯教授推薦書單 Recommended Reading from Prof. Thompson

《哲學新解》

蘇珊·朗格 (Susanne Langer)

美國心靈哲學及藝術哲學家蘇珊·朗格於1942年出版的著作。湯教授推許該書文字優美，彷彿一曲動人心弦的音樂。

Philosophy in a New Key

Philosophy in a New Key, by the American philosopher of mind and of art Susanne Langer, was published in 1942. Prof. Thompson thinks this book is intensely lyrical and tugs at the reader's heartstrings like a piece of music.



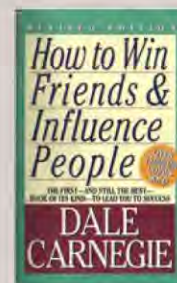
《卡內基溝通與人際關係 — 如何贏取友誼與影響他人》

戴爾·卡耐基 (Dale Carnegie)

1936年出版，曾在紐約時報暢銷書榜長達十年之久。湯教授覺得此書介紹的理論雖然簡單，但卻非常有效，透過正向思考來改善自己及身邊人。

How to Win Friends and Influence People

First published in 1936, *How to Win Friends and Influence People* by Dale Carnegie, remained a New York Times bestseller for ten years. Prof. Thompson says the theories introduced in this book are simple yet highly effective in helping the readers to improve themselves and those around them through positive thinking.



鍾玲： 走進書院的文學家

Starting a New Chapter at UM

**The Writer and New College
Master Prof. Chung Ling**

文 | 鄧曉炯
圖 | 譚金榮，部分由受訪者提供

Text | Joe Tang
Photo | Eric Tam, with
some provided by the
interviewee

鍾玲，1945年於重慶出生，因父親當年是中華民國駐日大使館武官，所以三歲就隨父母去了日本，1950年再轉赴台灣，一家人自此在高雄安定下來。鍾玲自東海大學外文系畢業後，在台灣大學外文研究所讀了一年後，進入美國威斯康辛大學麥迪遜分校比較文學系並取得碩、博士學位，後於紐約州立大學任教。1977年，她與著名導演胡金銓結婚並移居香港，自此開始穿梭港台兩地的生活，兼顧行政教學，同時寫作不綴。直至今年，她加入澳門大學（澳大），正式成為「澳大人」的一員。

結緣「文學」與「電影」

現以詩人、小說家聞名的鍾玲，高中期間就開始發表文章，全因當年的「文學青年」舅父從小就常買書給她看，像《傲慢與偏見》、《基督山恩仇記》這些西方文學作品的中譯本她讀了不少。15歲那年，免考升高中的她偶然在父親上司家裡看到整套還珠樓主的《蜀山劍俠傳》，立刻為之吸引，借回來，竟一口氣讀完整套一百多本！「那個奇幻世界和我們的很不一樣——什麼都可能發生，對時間、空間的認知全被打破，太有想像力了，對我影響很大，後來我小說裡的奇幻成份，不少就是從那裡來的。」

進入大學後，鍾玲讀了白先勇、王文興等一批台灣現代作家的作品，她也自此創作不斷，至今出版了十多本散文、小說、詩歌等著作。談起自己的書寫風格，鍾玲坦言，除受《蜀山》影響鍾情書寫古典世界之外，也喜歡書寫女性，就以「美人圖」詩歌系列為例，她選擇從第一人稱角度切入，寫了不少中國歷史上的知名女性，「我寫過西施，還有王



Chung Ling was born in 1945, in Chongqing, China. Because her father was a military officer with the Republic of China's Embassy in Japan, she travelled to Japan with her parents at the age of three. In 1950 her family moved to Taiwan, where they eventually settled in Kaohsiung. After graduating from the Department of Foreign Languages and Literature, Tunghai University, Chung Ling went on to pursue further studies in the Department of Foreign Languages and Literature at Taiwan University for one year. Later she received her master's and PhD degrees in comparative literature from the University of Wisconsin—Madison, and then taught at the State University of New York. She married the well-known film director Hu Chin-chuan in 1977 and moved to Hong Kong, dividing her time between Hong Kong and Taiwan amid her many roles in teaching, administration and writing. Earlier this year she joined the University of Macau (UM) as college master.

Falling In Love with Literature—and the Film Director

Now a renowned poet and fiction writer, Chung Ling began to publish her own articles when she was still in high school, which was thanks to her uncle who, himself a book lover, often bought Chung Ling the Chinese translations of western classics such as

昭君、唐婉（詩人陸游之妻）、蘇小小、武則天等，以現代女性的心，去假設古代的環境，並感受她們當時所受的壓力。」她在小說《過山》裡，描寫一個穿越時空的女子，從現代回到南越王朝的經歷，「也是想寫她的感覺，看看女性在政治鬥爭、人情復仇裡面，是怎樣的處境。」

除了文學世界，另一段生活經歷就是她與知名導演胡金銓的愛情故事，這次有幸聽鍾教授從頭說起：話說當年鍾玲還在紐約州立大學艾伯尼校區比較文學系任教，某天一堂中國文學課上，有位美國學生告訴她，有位中國導演剛奪下康城影展大獎（編按：1975年胡金銓以《俠女》一片於該影展獲高級技術大獎），那人現在在紐約，不如請他來演講？鍾玲覺得這提議不錯，於是嘗試聯繫胡金銓。那次演講辦得很成功，胡鍾兩人也相談甚歡。不料，幾天後的一晚，鍾玲突然接到胡的電話，劈頭就是一句：「鍾玲，你跟我吧！」

「當時我嚇了一跳。」那你怎麼回答他？「我就說，那我到紐約來和你見面吧？」其實，當時鍾玲也很仰慕胡金銓的才華，「他的作品都有很濃厚的中國文化底蘊在裡頭，那種文人氣質，和別人拍的都不一樣。」鍾玲說後來才知道，那次是胡導演和幾個朋友喝酒，本來對鍾玲就「有意思」的胡金銓，在朋友「激將法」之下的「壯膽」之舉，至於後來的故事，相信大家都已知曉了。

結緣「澳門」與「澳大」

從台灣到美國再到香港，走遍天下的鍾教授，為何選擇走進澳大的校門呢？「我和程海東副校長認識已久，他對教育非常熱忱，我很佩服，也很受感染。」鍾玲非常認同程副校長大力推介的「書院理念」，而且「他給我們每個書院院長充分發揮的機會，可以建立書院自己的風格。在四年裡怎樣令一個大學生成熟起來？我覺得這是個天大的機

Pride and Prejudice and *Le Comte de Monte-Cristo*. At age 15, Chung Ling stumbled upon a complete collection of *The Tale of the Swordsman in Shu Shan* by Li Shanji in her father's boss's home. Finding the story utterly irresistible, she borrowed the collection which included more than 100 volumes, and having some spare time because of being exempted from the senior high school entrance examination, she finished all of them. "That fantasy world depicted in the novel was vastly different from the world I was in—in that world anything could happen," recalls Chung Ling. "It re-conceptualised my perception of time and space. It was extremely imaginative and it played a seminal role in my later works. Many of the fantasy scenes in my later novels are borrowed from it."



在美國威斯康辛大學麥迪遜分校的書院校園歲月
Chung Ling, a postgraduate student, at the University of Wisconsin-Madison.

“

我希望書院像家一樣，我們包括副院長、導師，還有高年級生擔任的小老師的團隊，能帶給他們關懷和溫情。

I hope our residential college is like a warm home where I, the associate master, fellows, and the tutor team comprised of upperclassmen, make the students feel loved and cared about.

”

In college she read Kenneth Pai Hsien-yung, Wang Wenxing, and a number of other Taiwanese writers. She also continued with her own writing. To this day she has published a dozen short story collections and books of poetry. Talking about her writing style, Chung Ling admits that she has a penchant for writing about ancient times, which she attributes to the influence of *The Tale of the Swordsman in Shu Shan*, but she says she also likes to write about women. Take her *Portraits of the Beauties*, a poetry series, for instance. In this series she wrote in the first person about many famous females in Chinese history. "I wrote about Xi Shi, Wang Zhaojun, Tang Wan (the wife of the poet Lu You), Su Xiaoxiao, Wu Zetian, and so on," says Chung Ling. "I tried to imagine, from a modern woman's point of view, what it would be like to live in the ancient times as these women, to feel the pressure they had felt." In *Cross Over* she told the story of a modern woman who time-travelled back to the Nanyue Kingdom. "In this book, I was also trying to imagine how a modern woman

would feel if she suddenly found herself back in ancient China and entangled in the complexities of political conflicts and emotions like love, hate and revenge."

It's tempting to expect that a well-known fiction writer who has written many fascinating stories that have stretched the readers' imagination time and time again would probably disagree with the saying that, "Truth is stranger than fiction", for after all what could be so strange in real life as to surprise a creative writer? But interestingly, the beginning of Chung Ling's love story with the famous film director Hu Chin-chuan was indeed one for the books. It all started when she was still teaching at the State University of New York at Albany. One day in a Chinese literature class, an American student told Chung Ling that the Chinese director who had just won an award at the Cannes Film Festival (editor's note: Hu Chin-chuan was awarded a grand prix at the Cannes Film Festival in 1975 for his film *A Touch of Zen*) was in New York at the moment, and asked what Chung Ling thought about inviting him to give a lecture. Chung Ling liked the suggestion and tried to contact Hu. Not only did that lecture turn out to be a great success, but Chung and Hu hit it off immediately. Several nights later, Chung Ling was surprised by a phone call from Hu, who said out of the blue, "Chung Ling, marry me!"



會，能在年輕人的人格形成的最後階段，讓他們朝著正面、有意義的方向去走。」

那鍾教授希望自己書院日後是何模樣？「我希望書院像家一樣，我們包括副院長、導師，還有高年級生擔任的小老師的團隊，能帶給他們關懷和溫情；另一方面就是要讓學生們成為有文化教養的人，（書院）會辦一些中國傳統的文化、歷史、文學、電影的工作坊和演講等活動。」

鍾教授還提出，日後會對澳門生、內地生推出不同的幫助，「比如說，內地因一孩政策，小孩大多在『被疼愛』的環境長大，較少為別人設想，所以要教育他們走出自我、關心社會；至於澳門學生方面，因為這裡賭博風氣可能造成金錢至上的物質主義，我們要想方法讓他們接觸不一樣的價值觀，比如我認識一位很有成就的歷史學家，也做過大企業的董事總經理，還是位很有使命感的知識分子，如果請他來分享一下，會給學生們帶來很好的啟發。」

說起來，鍾教授與澳門的緣分始於1977年——那次她首度踏足澳門，是和胡金銓導演來度蜜月。但30多年過去，桃花人面皆不同，她的感受又是如何呢？「澳門人給我的感覺很友善，很愉悅，好像大家做事情都滿快樂的。」喜歡大山

What was Chung Ling's response then? "I was absolutely dumbfounded," recalls Chung Ling. "And I said to him how about I come to New York to meet you?" Chung admits that she too admired Hu's talent. "His works are one of a kind," says Chung. "What distinguishes his works from the works of others is this rich flavour of Chinese culture, the same way an intellectual stands out from the average person because of the aura of intellect." Chung later learned that Hu's call was made during a dinner in response to a dare from his friends who knew he felt attracted to Chung. Emboldened by alcohol, he called, and the rest is history.

New Relationship with UM Long after the Honeymoon

From Taiwan to the United States to Hong Kong, Prof. Chung has been to many places in the world. Why did she choose to join UM? "I've known Prof. Haydn Chen, the vice rector at UM, for a long time," says Chung Ling. "He is very dedicated to education, which I admire very much and which has influenced me deeply." Chung says she strongly identifies with Haydn's residential college concept. "And what's more important, he gives me and the other college masters a lot of freedom to decide how we want to develop a distinctive character and a unique style for our residential colleges, as well as how we plan to help our students mature over a course of four years," says Chung Ling. "I think this is an amazing opportunity—to influence young people during the final phase in their character development in a positive and meaningful way."

So what's Prof. Chung's vision for the residential college she is in charge of? "I hope our residential college is like a warm home where I, the associate master, fellows, and the tutor team comprised of upperclassmen, make the students feel loved and cared about," says Chung. "Also, we will organise various kinds of activities like workshops, talks and films to help the students know more about traditional Chinese culture, history and literature."



1977年，鍾玲（左二）與胡金銓（左一）、導演李翰祥及夫人（右一及二）在香港。
Chung Ling (2nd from left) with Hu Chin-chuan (1st from left), director Li Han-hsiang (1st from right) and his wife (2nd from right) in Hong Kong, in 1977.

大水的鍾教授說，自己喜歡親近大自然，她去過一次路環，留下了很深的印象。

習慣早起寫作的鍾教授，一般早上6點起床，寫作一個半小時左右，然後再開始工作。但這段時間因籌備新書院的工作，恐怕創作要暫停一下，「現在事情很多，每天回到家就很累了，早上一起來也都是想著書院的工作，也許要等（書院的工作）上了軌道後再寫吧！」鍾教授透露，自己正在創作一部長篇小說，剛開了個頭，但不太滿意，可能要重新寫過，引頸以待的書迷粉絲們，可能要再耐心等一等囉！



鍾玲（左一）與恩師余光中及夫人
Chung Ling (1st from left) with her teacher Yu Guang-zhong and his wife

鍾教授推薦清單 Recommended Book and Film from Prof. Chung

莫言《生死疲勞》

莫言2006年出版的《生死疲勞》，敘述了1950年到2000年中國農村50年的歷史。鍾教授說，小說最重要就是讀得下去，這本書就很有幽默感，讀起來非常有趣。

Fatigue Beyond Life and Death by Mo Yan

Fatigue Beyond Life and Death by Mo Yan, published in 2006, depicts the changes of the countryside in China over a course of 50 years from 1950 to 2000. Prof. Chung thinks one of the most important aspects of any fiction book is readability, and she thinks this book is very humorous and entertaining.

胡金銓《龍門客棧》

由胡金銓編導的《龍門客棧》1967年於台灣上演。鍾教授說他在此片中把中國的俠義精神表現得淋漓盡致，更將京戲動作融入武打，注入類似現代舞蹈的新風格。

Dragon Gate Inn by Hu Chin-chuan

Dragon Gate Inn, written and directed by Hu Chin-chuan, was screened in Taiwan in 1967. Prof. Chung says if one wants to find a film that best represents the spirit of chivalry in ancient China, he or she need not look further than the *Dragon Gate Inn*. What's more, the director integrates the moves of Peking Opera into martial arts, giving the film a new style similar to that of modern dances.



Chung plans to have different educational foci for students from mainland China and students from Macao to meet their different needs. "For example, because most of the students from mainland China are the only child in their families due to the 'One Child' policy and thus grew up in an overly indulgent environment, they need to learn to be less self-absorbed and to think more about others and care about society," notes Chung Ling. "Whereas students from Macao need to be exposed to a different set of values, especially values about money, to prevent the ubiquitous presence of casinos and the prevalent gambling practice in Macao from insidiously implanting the 'Money Is Everything' materialism in them. I know a very accomplished historian, who is an intellectual with a great sense of mission. He used to be the managing director of a large company. I could invite him over to give a talk to our students. I think there is a lot our students can learn from him. And this is just one example of the kind of things we can do."

Prof. Chung's ties with Macao date back to 1977—that was when she first visited this city on a honeymoon with her new husband Hu. Now it's been 30 years, and how much has Macao changed compared to the one in her memory? "The place has changed a lot for sure, but what has stayed the same are the friendliness and the joy of the people here," remarks Chung. "Everyone I've seen here, no matter what they do, just seems genuinely happy." A lover of nature, Prof. Chung says she's been to Coloane once and it has left a very deep impression on her.

An early riser, Chung Ling normally gets up at six to write for about one hour and a half before she sets to work. But she has to suspend this early morning routine for a while because there is so much to prepare for the new residential college. "There are a lot of things to do. Every day when I get home I'm too tired to write," says Chung. "And every morning when I get up, I'm too preoccupied with the work about the new college to write either. So maybe I'll resume writing when the college is on the right track." Prof. Chung discloses that she is writing a long novel, but she isn't entirely happy with the beginning, so she is thinking about starting again from scratch. If you are a fan of her books, you may have to hold your breath a little longer before having the pleasure of diving into her next book.



推動澳門教育測量與評鑑： 澳門大學教育學院教育測驗 與評核研究中心

*Promoting Educational Measurement
and Evaluation in Macao:
UM's Educational Testing and
Assessment Research Centre*

撰文：張國祥
Chinese text:
Cheung Kwok Cheung



作者為澳門大學教育學院教育測驗與評核研究中心主任張國祥教授，主要教學與研究領域包括課程與教學、教育評核、教育評鑑、數理教育等。

The author Prof. Cheung Kwok Cheung is the director of the University of Macau's (UM) Educational Testing and Assessment Research Centre. His main teaching and research areas include curriculum and instruction, educational assessment, educational evaluation, and mathematics and science education.

澳門位處中國南海之濱，有中國境內最早的天主教大學，承載著中西文化交流的歷史使命，厚重的人文思想和重視教育的傳統深植於每一代的澳門人身上。然而，由於歷史緣故，澳門的學校在自由辦學，多元並行的同時，卻一直未能充份發揮教育評鑑在教育過程中的重要作用。

當代國際教育評鑑的發展實質上是從考試到評核的改進，這對提高教育質量、促進教育公平、合理配置和建設人力資源均具有劃時代的重要意義。傳統的考試觀念，常將「考試」與「評核」的關係混淆。事實上，考試是對教育現象進行量化的認識，為教育評核提供量化的數據資料；教育評核則根據評核標準，收集關於受教育者的各種資料數據，進行各種素質的價值評估和合理推斷的過程，說明研究對象的受教育狀況及能力特徵，利用評核而來的訊息進行決策。

中國是考試制度的故鄉，文獻記載的第一次考試見於《尚書·堯典》：四岳舉鯀治水，岳曰：「異哉！試可乃已。」而四岳舉舜繼位，帝曰：「我其試哉。」此即為考試行為之開端，它包括了對個人能力與素質的考試及評核的雙重意義。而古漢語的「考」與「試」各有解釋，據《廣雅》所載，「考」是「擊打」，引申為詢問、考核的意思。漢代許慎的《說文解字》把「試」解釋為「用」的意思。

美國教育評鑑之父泰勒（Ralph W. Tyler）認為教育評核實質上是一個確定課程與教育計劃在實際學習上所能達到的教育目標的程度的過程。著名的美國教育心理學家布魯姆（Benjamin Bloom）則指出教育評核是獲取和處理用以確定學生能力水平和教學有效性

Situated on the South China Sea, Macao has historically been an important cultural gateway between China and the west—in fact the first Catholic university in China was founded in Macao. The city's rich cultural heritage and its deep-rooted faith in the value of education have contributed to the academic freedom and diversity of its educational institutions. However, due to historical reasons, educational evaluation has yet to play a sufficient role in the process of education.

A review of the development of educational evaluation worldwide reveals that the process has in essence changed from an examination-focused approach to an evaluation-focused approach. This progress has been epoch-making because of its effects on the quality of education, equity in education, as well as human resource allocation and development. The conventional point of view tends to confuse “examination” with “evaluation”, when in fact these are two distinctly different concepts. Examination involves understanding education in quantitative terms, whereas educational evaluation refers to a process during which various types of data about the subject of education are collected according to established criteria so that one may evaluate and make legitimate inferences about the person's various qualities. It describes the educational status quo of the person under study as well as the characteristics of that person's ability, and uses the information from the evaluation for decision-making.

Ancient China was the birthplace of today's examination system. The first examination in recorded Chinese history was described in *Shang Shu*. During the reign of Emperor Yao, a legendary ruler in ancient China, the empire was frequently plagued by floods. A high-ranking official recommended someone named Gun to manage the task of taming the floods. Having reservations about Gun's personality and temperament, Emperor Yao was reluctant to make the appointment. The official then said something to the effect that, “Your humble servant thinks there is no harm in using him on a trial basis.” Later this same official recommended another obscure young man named Shun as Emperor Yao's successor, to which Yao said something to the effect that “I shall need to test him.” It is believed that these two episodes described in *Shang Shu* were the origin of today's examinations. The word for “examination” in the modern Chinese language is *kao shi*, which consists of two separate Chinese characters. In the archaic Chinese language, these two

的證據的方法，是教育的終極目標與完成教學任務目標的輔助手段，是教育研究與教學實踐的一種工具、反饋和矯正系統。

如果說考試是源自中國古代選拔人才的制度，則教育測量和評核即為西方近代工業社會發展的產物。隨著社會經濟的發展，考試從古代最初強調選拔分流的功能，逐漸演變成今日重視能力培養與評鑑的功能，考核的內容也從知識本位邁向能力發展上，評核機構更從管理的角色轉向服務教育、優化教學、促進學生全人發展的方向邁進，突出「促進學習的評核」（Assessment for learning）在教育測量中的作用。

因此，為回應教育測量和評核的需求，教育測驗與評核研究中心於2006年成立，它隸屬澳門大學教育學院，一直致力推動教育測驗與評核的應用與諮詢服務，藉此逐步建立及發展全澳性的教育評核體系，冀能實現教與學的良性互動，科學有效地呈現澳門的教育狀況，為澳門制定長遠的教育政策提供可堪借鑑的客觀數據。

教育測驗與評核研究中心目前主要從事兩類的教育評核專案研究：

第一類是對學生個體的評核：主要集中於多元智能的評核研究，體現在對學童智能的觀察、記錄、誘發及評估，重視多元智能理論在教育實踐中的應用，突破僅從測驗考試結果作為區分學生才幹的誤區，關注兒童非智力因素領域的發展，以促進教學，提高學習效能，發展人的潛能和個性為目的。從而在測量技術、應用模式與人才培育上，將多元智能理論、教育評核與兒童的學習經驗三者互相緊扣在一起，為學生的能力發展和不斷提高，提供即時和良好的回饋，促使學生認識自身的優勢和弱勢智能，以及認識可發展的空間。這種多元的綜合評核方法現時已在澳門學校內

characters, *kao* and *shi*, had separate definitions. According to *Guang Ya*, *kao* meant “to beat”, which later evolved to mean “to ask or test”. In *Shuo Wen Jie Zi*, written by Xu Shen from the Han Dynasty, *shi* is defined as “to use”.

Ralph W. Tyler, who is considered the father of educational evaluation in the United States, thinks that educational evaluation is in essence a process of evaluating to what extent a given curriculum and instructional programme accomplish their educational objectives. Benjamin Bloom, the renowned educational psychologist in the United States, proposes that educational evaluation is a method of obtaining and processing evidence for establishing the student's level of learning and learning effectiveness. He believes educational evaluation is a means of achieving instructional objectives and the ultimate educational objectives, as well as a tool and system which provides corrective feedback for educational practice and research.

If today's examination system had its origin in ancient China, when the examination system was designed to select talent, then educational measurement and evaluation is a product of the development of modern industrial society. With socioeconomic development, the functions of the examination system have gradually changed. In ancient times, the examination system mainly served the purpose of screening candidates and selecting the most outstanding talent. Today the focus is on the development and evaluation of abilities. Examination requirements have also changed from being knowledge-focused to ability-focused. Today the role of an evaluating organisation is less that of a manager than of a service provider geared towards enhancing teaching and promoting well-rounded development of the students.

To meet the increasing demand for educational measurement and evaluation that has emerged against this backdrop, the University of Macau in 2006 founded the Educational Testing and Assessment Research Centre (ETARC), which is under the Faculty of Education. ETARC is dedicated to promoting the application of educational testing and assessment as well as the related consultancy service. ETARC hopes to gradually establish a Macao-wide educational assessment system to promote effective interactions between teachers and students, to present the status quo of education in Macao in a scientific way, and to provide objective data to facilitate long-term policy-making.

ETARC's assessment mainly comes in two types.

The first is assessment of individual students, with focus on the assessment and study of multiple intelligences through observation, recording,



多元智能教育評核研究成果叢書
Book series on educational assessment based on the theory of multiple intelligences

取得了一定的成績。此外，研究中心還利用資訊科技的發展，開發教育測驗與評核的電腦應用軟體系統，例如建立「多元智能開發暨優質教育諮商自評系統」（簡稱BRIDGES），這些在澳門學校所得到的成功實踐經驗均已集結出版，同時向區內教育同工及讀者推廣，並取得了理想的效果。

另一類是對學校、地區和跨國的學生能力發展水平和教育質量狀況的評核研究：在對學生個體進行現代教育評核的基礎上，進一步與國際知名的教育評鑑學術機構，例如經濟合作暨發展組織（Organization for Economic Co-operation and Development）、澳洲教育研究議會（Australian Council for Educational Research）、教育測驗服務社（Educational Testing Services）等組織合作，進行涉及澳門所有中學和15歲中學生的「學生能力國際評估計劃」（Programme for International Student Assessment, PISA）研究。PISA使用嚴謹的測試程序與先進的數據分析方法，確保了評核結果的高效度與高信度，具有強烈的可

induction and assessment. ETARC adopts a comprehensive, multifaceted approach based on the theory of multiple intelligences, which breaks through the misconception that test results are the sole criterion to judge a person's ability and places equal emphasis on non-intelligence factors. This approach combines the theory of multiple intelligences with educational evaluation and the student's learning experience. It seeks to improve learning outcomes and to help the student achieve maximum potential by providing prompt, constructive feedback which helps identify the student's strengths, weaknesses and areas for improvement. This comprehensive assessment approach has achieved some good results in many schools in Macao. And building on this good foundation, ETARC has developed several computerised software systems for

educational testing and assessment, such as the BRIDGES system. Experience from the successful implementation of these systems has been published and promoted to educators and average readers in Macao to good effect.

The second type of assessment in which ETARC is involved is the assessment and study of the level of ability of students from different schools, regions and countries as well as the quality of education they receive. ETARC has established collaborative relationships with some well-known international organisations on testing and assessment projects, including its collaboration with the Organization for Economic Co-operation and Development, the Australian Council for Educational Research, and the Educational Testing Services, on the Programme for International Student Assessment, or PISA, which targets all secondary school students in Macao as well as 15-year-old secondary school students from around the world. Now a macro education assessment system, PISA compares the status quo of education in participating countries and regions. It uses a rigorous testing process and an advanced data analysis method to make sure that the assessment results are reliable, comparable, and objective.

Using the theory of educational measurement and highly developed operational model adopted by advanced international academic institutions, ETARC assesses 15-year-old students who are about to complete compulsory

比性、科學性和客觀性。PISA從國際比較的角度考察參與國家和地區的基礎教育狀況，形成了一個宏觀的教育評核體系。

教育測驗與評核研究中心藉著借鑑目前國際先進學術機構的教育測量理論和成熟的模式，在PISA國際比較教育的統一框架下，評價澳門即將完成義務教育階段的15歲學生應付未來生活的準備程度，為澳門教育評核機構參與國家或地區間的國際比較，提供了合作的平台與基礎。近年，隨著教育學術組織間的密切交往，也深化了中心與國際間的教育評核專家的合作，以及研究成果的交流。

教育測驗與評核研究中心在澳門教育暨青年局的財政支持下，開創了在澳門進行大型國際教育測試的先河，為本地基礎教育政策的討論、界定、實施與監測，提供了一個嶄新的起點；推動澳門學校透過參與國際上具公信力的教育評核，從而了解本地的教育狀況，並能從國際比較的視角，發現自身的優勢與不足，結合相應的教育政策，改革及完善澳門的基礎教育。澳門經過了從2003年到2012年的四個PISA測試週期後，研究中心在測試工具的開發方面，正朝著全面電腦化的數碼測試目標進發，在發展全澳性的教育評核體系的同時，並致力達到國際測試的先進技術水平。

教育測驗與評核研究中心除了從事教育評核的研究工作外，同時亦秉承澳門大學培養優秀人才的使命，十分關注培養本地教育科研人員，不少教育工作者及學者均利用教育評核所收集的數據資料進行教育研究。例如澳門大學教育學院首位博士畢業生陳敬濂利用PISA國際數據庫的數據資料，探究澳門基礎教育的教育公平問題，另外也有不少澳門前線教師在相關的學科領域中利用該數據庫研究不同的議題，今年畢業的博士畢業生麥瑞琪則從性別

education in Macao for their readiness to meet future challenges, thereby laying the groundwork for educational assessment organisations in Macao to participate in educational collaborations at national and international levels. The increased frequency in such interactions has in turn deepened ETARC's collaboration and exchange of research findings with international experts in the field.

Thanks to the financial support of the Education and Youth Affairs Bureau of Macao SAR, ETARC has been able to carry out large-scale international educational assessment, the likes of which has never been seen in Macao.

These educational assessment exercises not only have added a whole new dimension to the discussion, definition, implementation and monitoring of local policies on basic education, but they have also created opportunities for local schools to participate in internationally-acknowledged educational assessment programmes, which helped Macao to better understand the status quo of local education as well as its strengths and weaknesses from an international perspective. Such new understanding, when coupled with corresponding educational policies, could go a long way towards improving basic education in Macao. Between 2003 and 2012, four rounds of PISA were conducted in Macao. ETARC is now working to develop fully computerised assessment tools, hoping to establish a Macao-wide educational assessment system that meets international standards.

In addition to educational assessment and research, ETARC is also dedicated to nurturing talent. Data collected from educational assessment has been



澳大教育學院首位博士畢業生陳敬濤（中）順利通過論文答辯
 FED's first PhD graduate Chan Keng Lim (middle) has successfully passed his thesis oral defence

差異的角度探討澳門學生的閱讀素養。因此，教育測驗與評核研究中心在培養本地人才方面發揮了積極的作用，促進了在澳門逐步建立一支高水平，且能與國際教育評核接軌的科研人員，真正使教育評核的結果發揮反饋調控的功能。 ▮

used by many faculty members and students for educational research. Chan Keng Lim, the first PhD graduate of FED, has used the PISA international database to study equity in basic education in Macao. Mak Soi Kei, this year's PhD graduate of FED, studied the reading literacy of Macao students from the perspective of gender differences with the aid of the database. These examples show that ETARC has played a positive role in nurturing local talent and in developing a high-quality team of researchers well-versed in educational theories and familiar with international practices in educational assessment. As this research team grows stronger, educational assessment hopefully can better fulfil its intended function to provide corrective feedback for optimal learning outcomes. ▮

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