

# 學術研究

## **Academic Research**

# 全球創先"中葡通Diz lá!" 手機應用程式發佈

為配合國家"一帶一路"發展、澳門作為中國與葡語國家服務平台的定位策略,由澳門特區政府社會文化司譚俊榮司長倡議、本院開發、全球創先的"中葡通Diz lá!"手機應用程式正式發佈,該程式為澳門及中國內地廣大學習葡語及前往葡語國家作經貿及旅遊的人士特別而設,打破學習葡語界限。發佈儀式由來自政府部門、大學及業界代表200人出席,共同見證本院研發的跨平台學習葡語新工具的落實應用。

"中葡通Diz lá!"手機應用程式發佈會暨葡語教學新書發行儀式"於2月13日在本院隆重舉行,由社會文化司譚俊榮司長、中聯辦教育與青年工作部浦海龍副部長、外交部駐澳特派員公署政策研究室冉波主任、莫桑比克駐澳門總領事Rafael Custódio Marques等主禮。

## Launch of "Diz lá!" Mobile App

MPI officially released "Diz lá!", a mobile software application designed specifically for Macao people and for Mainland China-based learners of Portuguese, as well as those people that are leisure or business travellers to Portuguese-speaking countries. It was developed by the Institute with the policy support of Dr. Tam Chon Weng, Secretary for Social Affairs and Culture of the Macao SAR, in response to the strategic positioning of Macao as a service platform for China and Portuguese-speaking countries, and in line with the country's "Belt and Road Initiative". The launch ceremony for the app was attended by about 200 Government, university and industry representatives, who witnessed the advent of this new cross-platform Portuguese learning tool.

The Ceremony for the Release of the "Diz lá!" app and for some new books on the study of Portuguese, was held on 13 February 2018 at the Institute. Secretary Tam officiated at the event, as did: Mr Pu Hailong, Deputy Director-General of the Department of Education and Youth Affairs of the Liaison Office of the Central People's Government in the Macao SAR; Mr Ran Bo, Director of the Policy Research Department under the Office of the Commissioner of the Ministry of Foreign Affairs in the Macao SAR; and Mr Rafael Custódio Marques, Consul-General of Mozambique to Macao.

社會文化司譚俊榮司長(中)等 嘉賓主禮 "中葡通 Diz lá!" 手機 應用程式發佈

Dr. Tam Chon Weng (centre), Secretary for Social Affairs and Culture of the Macao SAR, officiated with other guests at the "Diz lá!" app launch ceremony



"中葡通Diz lá!"是本院中葡英機器翻譯聯合實驗室開發的一款學習葡萄牙語的手機應用程式,由本院多位中文、葡語及電腦學等不同領域的專家學者共同研發完成,適合以中文為母語的人士使用,使他們可以隨時隨地學習葡萄牙語。整套程式以歐洲葡語為主,亦添加了具澳門特色的詞彙,而發聲部分更由本院多位葡國藉語言教授親自錄製。藉着整個開發團隊的緊密配合、嚴謹開發,使程式擁有專業性的同時也具有良好的用戶體驗。

The "Diz lá!" app is an example of the combined effort of MPI's experts and academics in fields including Chinese language, Portuguese language, and computer science. The app is an effective way for native speakers of Chinese to learn Portuguese while they are on the move. It mainly uses European Portuguese and includes a vocabulary related to Macao, with pronunciations recorded by many of the Institute's Portuguese teachers of linguistics. This professional and user-friendly app was the result of the developers' good teamwork and prudent approach.

# 與立法會簽訂"中葡葡中公文輔助翻譯系統" 合作協議書

2018年8月14日,澳門特別行政區立法會和本院簽署了關於"中葡萄中公文輔助翻譯系統"合作協議書。期望借力大數據、人工智慧等科技的不斷進步,進一步提升中葡翻譯的準確度,並且減輕翻譯人員的工作負荷,從而提高翻譯效率。

由本院研發的"中葡萄中公文輔助翻譯系統"是一款基於業界最先進的神經網路機器翻譯技術的公文輔助翻譯系統,該系統可以輔助翻譯員進行中文或葡文公文的翻譯工作,從而減輕翻譯員繁重的工作量,有效提高工作效率。翻譯員可通過系統介面上傳公文。系統自動將上傳的公文進行段落拆分成句,本地資料庫譯句搜尋,機器翻譯等後台操作。隨後,原句和譯句以及各項資訊(如譯句來源、相似度、關鍵字、更多可選翻譯等)會清晰地顯示在介面上,供翻譯員參考和修改。該系統採用本院自主研發的神經網路技術進行中葡機器翻譯。我們使用的神經網路機器翻譯模型依靠千萬級的語料句對訓練建模而成,經測試,對澳門本地相關的公文翻譯準確度遠超谷歌翻譯、百度翻譯等同類翻譯軟件。該系統已獲得多個澳門政府部門的專業人士的認可。



# Cooperation Agreement between MPI and Legislative Assembly on Chinese-Portuguese/Portuguese-Chinese Official Document Auxiliary Translation System

On 14 August 2018, Macao's Legislative Assembly and MPI signed a cooperation agreement on "Chinese-Portuguese/Portuguese-Chinese Official Document Auxiliary Translation System". The aim is to improve the accuracy of Chinese-Portuguese/Portuguese-Chinese translation, boost translation efficiency and reduce translators' workload with the help of Big Data and artificial intelligence technologies.

The system was developed by MPI with the most advanced neural machine translation technology in the professional translation sector. The system works to assist translators in rendering official documents in either Chinese or Portuguese, thereby cutting the workload for such processes and improving work efficiency. Once the translators upload the text documents to the system, the system automatically splits the texts into sentences and then conducts searches for previously-translated sentences in its local database, translates the new sentences with the data and runs other procedures in the background. After that, the original and newly-translated sentences - as well as relevant information, such as the source of the translated sentences, similarity to other material previously processed, key words and alternate translations - will appear on the interface for the translators' reference and modification. The system applies MPI-developed neural network technology, and the neural machine translation models used were built through training with tens of millions of pairs of corpus sentences. In translating local official texts, the system significantly outperforms similar translation software from Google, Baidu and other companies in terms of translation accuracy, according to translation tests comparing the three systems. MPI's system has won recognition from professionals in many local public departments.

本院與立法會簽訂"中葡葡中公文輔助翻譯系統"合作協議書

MPI signed cooperation agreement with the Legislative Assembly regarding a translation system



參與機器翻譯培訓課程的學員聽課

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Attendees of a machine translation training course

# 中葡英機器翻譯聯合實驗室 階段成果豐碩

中葡英機器翻譯聯合實驗室由本院、中譯語通科技股份有限公司和廣東外語外貿大學三方於2016年10月11日聯合成立。實驗室主要從事基於中文、葡語、英語的先進機器翻譯技術的研究以及相應的應用開發工作,匯集了來自內地、澳門和葡萄牙的中葡翻譯專家以及電腦學科專家。近一年來,實驗室的工作重心放在如何提高機器翻譯質量以及致力於開發機器翻譯相關應用,使先進的研究成果盡快落地,為政府和民眾所用,目前已取得了豐碩的階段性成果。

本學年,實驗室繼續擴充中葡語料庫的平行語料的數量並同時優化語料庫的質量和結構,為搭建翻譯效果更優異的機器翻譯模型做基礎準備工作。為高效增加語料庫的數量,採用了高效的管理模式,並不斷改進語料整理和語料清洗的技術方法。從一開始的以人工為主的方式逐漸調整成為技術為主,人工輔助的方式,加大技術在各項工作中的比重,從而增加工作效率。

# Chinese-Portuguese-English Machine Translation Laboratory Yields Rich Harvest in Initial Stage

The Chinese-Portuguese-English Machine Translation Laboratory was jointly established on 11 October 2016 by MPI, Global Tone Communication Technology Co., Ltd. (GTCOM) and the Guangdong University of Foreign Studies. The Laboratory, consisting of Chinese-Portuguese translation and computer science specialists from Mainland China, Macao and Portugal is dedicated to the study of Chinese-Portuguese-English machine translation (MT) technology and to relevant technology application and development. The establishment of the facility focused on ways of elevating the quality of machine translation and on developing MT-related applications, with an aim to yield research results as soon as possible in the interest of the Macao SAR Government and the general public. It has made substantial progress so far.

The Laboratory will keep enlarging its Chinese-Portuguese parallel corpus of translated material and improve the quality and structure of its work in the coming academic year, in preparation for the building of a MT model that is able to generate better translations. The Laboratory has adopted an efficient management mode and continued to upgrade the methods of organising and tidying the corpus of material in order that the project can be efficiently expanded. The process has involved a gradual shift from major reliance on manual operation to reliance on automation supplemented by manual operation, leading to increased use of technology in various tasks and higher work efficiency.

為讓實驗室的培訓生更有效地處理中葡翻譯的語料,全部培訓生參與了機器翻譯的培訓。

另外,由實驗室研發的基於神經網絡技術的中葡直譯機器翻譯平台可支持中葡、葡中的實時在線互譯功能。在同等測試條件下,其翻譯結果的機器測評和人工測評均優於谷歌機器翻譯系統。神經網絡機器翻譯技術通過訓練海量的高質量中葡雙語平行語料,生成對應的翻譯模型。當用戶提出翻譯請求後,翻譯平台將利用翻譯模型生成對應翻譯結果。隨着語料庫的質與量提升以及技術升級,翻譯平台的翻譯效果會越來越好。

## 文化創意教學暨研究中心

中心致力於文化創意產業及教學方面的研究;開展文化創意 產業相關培訓活動,建構文創產業人才培養集群;為文化 創意產業的交流、展示、輔導及孵化等創建服務平台,立 足澳門、面向世界,以文化創新推動跨域交流與合作。

2017/2018學年,中心在開設課程與活動方面,依照澳門的現狀與需求強調重視品質,涵蓋文創沙龍、文創夏令營與文創學園、文創工作坊、文創Glonalo、文創研究及文創論壇等七方面。這些活動項目以及文化創意產業相關研究,構成中心與業界來往的橋樑,也為澳門文創工作者搭建互動交流的平台。

To ensure that the Laboratory's trainees deal with the Chinese-Portuguese text data more effectively, they were required to take training on Machine Translation.

The Chinese-Portuguese MT platform that the Laboratory developed based on neural network technology supports real-time online Chinese-Portuguese/Portuguese-Chinese translation. The system generates better translations than Google's MT system does under the same testing conditions according to both machine and manual assessments. Neural MT technology trains this system with enormous high-quality Chinese-Portuguese parallel corpus data enabling the formation of translation models, which will be used in generating translations upon users' translation requests. The platform's translation quality will progressively improve with the transformation in quality and size of the corpus of material, as well as via technological upgrades to the system.

## Cultural and Creative Industries Teaching and Research Centre

The Cultural and Creative Industries Teaching and Research Centre devotes itself to the study of cultural and creative industries and of teaching. It carries out training activities related to those industries, prepares a cluster of resources for training personnel for those industries and creates a service platform for exchange of information, advancement of exhibitions, advice on related matters, and to support the development of those industries. The Centre has its roots in Macao but also engages itself globally by promoting cross-border exchanges and cooperation through cultural innovation.

In the 2017/2018 academic year, the Centre opened courses and held activities appropriate to Macao's current stage of development and the city's needs, with an emphasis on presenting quality events. Among the Centre's activities were the "Cultural & Creative Salon", the "Midsummer Art Camp", "Cultural & Creative Courses", a "Cultural & Creative Glonalo Seminar", "Research on Cultural & Creative Industries", and a "Cultural and Creative Forum". These activities and industry-related studies have served as a bridge between the Centre and the industries, as well as an interactive and exchange platform for cultural and creative workers in Macao.

研究工作方面,中心與本地持份者保持交流溝通,以深入 了解相關研究的實況。針對文化產業委員會委託的"社 區文創"研究項目,分別在2017年8月在路環社區舉辦了 "澳門社區文創座談會"和11月在快艇頭里舉辦了"澳 門社區文創策略座談會——文化稟賦、創意驅動"座談 會,兩次活動共吸引了數十位本地業界人士與坊眾為社區 發展主題作深度交流,均取得滿意而寶貴的業界意見與坊 眾民意,推動了研究項目的論證與發現。針對其委託的另 一研究項目"傳承與創新——美食與文化產業的創意聯動 策略",項目負責人及研究人員也先後於2018年3月兩度 出訪馬來西亞檳城、馬六甲與台北進行調研工作,深入研 究當地的文化,達到了預期研究效果。根據研究需要,中 心在2018年5月安排了兩場共約30位美食和創意業界人士 參與的座談交流會,分別在"老房子麵包店"與"龍華酒 樓"舉行,為創意聯動策略主題集思廣益,深入交流,為 澳門美食產業的發展共同獻策。

Meanwhile, the Centre maintained close contact with local stakeholders in order better to understand commercial realities in carrying out relevant research projects. When conducting a research project on community cultural and creative industries - commissioned by the Committee of Cultural Industries - the Centre held a symposium on Macao's community cultural and creative industries in August 2017 in Coloane, and another in November at Beco dos Faitiões on the development strategies for those industries. Dozens of industry participants and members of the local community attended the events, and there were serious and in-depth exchanges about community development. The events saw satisfactory outcomes, with valuable opinions collected from the industry and the public alike, thus contributing to developing the arguments and advancing the findings of the project. In the "Inheritance and Innovation - Strategy of Combining Food and Cultural Industries with Creativity", another project commissioned by the Committee, the project leader and researchers performed field studies in Penang and Malacca, in Malaysia, and Taipei in Taiwan, for a thorough understanding of their respective cultures and benefitted as anticipated from that research. In the interest of the project, the Centre organised two exchange sessions for nearly 30 people from the catering and creative sectors respectively at the Old House Bakery and Long Wa Restaurant, to gather opinions of attendees about the combination strategy through in-depth exchanges to the benefit of the development of Macao's catering business.

"仲夏藝街"文創市集開市儀式

Opening ceremony of "The MPI Mid-Summer Arts Camp Activities" an event covering cultural and creative matters



#### 博彩與娛樂管理專業學士學位課程學生赴美國交流

Students of the Bachelor of Business Administration in Gaming and Recreation Management join exchange programme in the United States

#### 博彩教學暨研究中心

博彩教學暨研究中心自成立以來,主要致力於博彩業的人才培養和科研工作。為有志繼續進修的在職人士提供進修學位教育的機會,中心全力支持工商管理學士學位課程(博彩與娛樂管理專業)的教學、學術及專業活動、海外交流等,協力培養本地高層次的博彩管理人才。2018年6月,中心學位課程接受了香港學術及職業資歷評審局的課程評鑑。經過專家組的文件審核和實地考察,課程的目標及學習成效、課程內容和結構等十個領域均獲高度正面評價,順利通過香港學術及職業資歷評審局的評鑑。

中心致力推動區內博彩領域的學術研究,開展博彩業對社會及經濟影響的相關研究,通過課題的研究,為政府、企業和社會提供決策諮詢服務。中心研究團隊獲國家自然科學基金委員會及科學技術發展基金資助進行"社會、環境、遺傳因素對博彩行為的影響——公共行政管理的視角"的研究

## Gaming Teaching and Research Centre

Since its establishment, the Gaming Teaching and Research Centre has been dedicated to training professionals for the gaming industry and in engaging in scientific research about the industry. In order to help individuals in employment but who want to pursue further studies via a degree programme, the Centre fully supports the running of the bachelor's programme in Business Administration in Gaming and Recreation Management, as well as corresponding teaching, academic, professional and overseas exchange activities to help produce high-calibre local managerial professionals for the gaming industry. The programme underwent HKCAAVQ's Learning Programme Review in June 2018, and successfully passed, having received the review panel's positive comments in 10 aspects, including documentation and field observations about the programme, in addition to the content, the structure, the goal and educational outcome of the programme.

The Centre also strives to promote academic research in the field of gaming. It has launched research regarding the gaming industry's impact on local society and the economy and provides research-based consulting services to aid decision-making by the Macao SAR Government, by enterprises and the community. Its research project "The Impact of Social, Environmental and Hereditary Factors on Gaming Behaviours - from the Perspective of Public Administration" has been funded by the National Natural Science Foundation of China and Macao's Science and Technology Development Fund. The Centre has been commissioned by Macao's Talents

工作,以及獲澳門人才發展委員會委託進行"澳門博彩業未來人才需求調研"等。此外,中心積極參與外界的學術/專業活動,包括:2017年11月本地博彩業界盛事"2017澳門娛樂展";2018年5月博彩業界國際盛事"Global Gaming Expo (G2E) Asia"。

中心依託學術研究積極參與各項社會服務,包括繼續參與社會工作局組織的"問題賭博防治服務協作會議"等。黃貴海副教授繼續在社會工作局牽頭、博彩監察協調局和其他高校等單位派員參與的負責任博彩工作小組,為澳門加大推動負責任博彩作出貢獻。

## 葡語教學暨研究中心

葡語教學暨研究中心自成立以來,實現了如下使命目標:推 動關於葡語及葡語系國家文化的學術研究;面向葡語教師提 供師資培訓;通過不同渠道加強與葡語國家的文化交流;積 極開展相關領域教學教材的出版,以此為中國內地及澳門的 葡語教學提供助力。

為實現澳門作為中國與葡語國家經濟文化交流的重要平台這一戰略目標,本院不斷完善中葡翻譯課程,並根據澳門特別行政區法律制度,提高中國與葡語國家語言文化教學和研究水平。因此,中心開展的工作不僅旨在實施國家政治方針,更是為了滿足社會發展的需要。同時,還與本院其他學術單位共同完善其相關教學和研究目標。

Development Committee to carry out research on the "Future Talents Demands in Macao's Gaming Industry" among other tasks. The Centre has also been active in participating in external academic/professional activities, including the MGS Entertainment Show 2017, a local event held in November 2017. The Centre was also involved in Global Gaming Expo (G2E) Asia 2018, a regional event for the gaming industry that took place in May 2018.

Because of its academic research, personnel from the Centre have frequently attended various events in relation to social issues, such as the "Conference on Problem Gambling Prevention and Cooperation on Treatment Services". The event was organised by the Social Welfare Bureau. MPI Associate Professor Huang Guihai served during the year on the Responsible Gambling Working Group initiated by the Social Welfare Bureau. Representatives of the Gaming Inspection and Coordination Bureau, and higher education institutions other than MPI also joined the Working Group in order further to promote responsible gambling.

## Portuguese Language Teaching and Research Centre

The Portuguese Language Teaching and Research Centre has accomplished a number of goals since it was established. It has promoted academic research on Portuguese language and the cultures of Portuguese-speaking countries, provided Portuguese language teacher training, increased cultural exchanges with Portuguese-speaking countries through diverse initiatives, and has facilitated the publication of teaching materials in relevant fields in order to endorse Portuguese language teaching in Macao and Mainland China.

To meet the country's strategic goal of turning Macao into an important platform for economic and cultural exchanges between China and Portuguese-speaking countries, MPI has unceasingly improved its Chinese-Portuguese translation programmes – as well as the language and cultural teaching and research in China and Portuguese-speaking countries – based on the legal system of the Macao SAR Government. Hence, the Centre not only works for the implementation of the national political strategy, but also for the fulfilment of the needs of social development. Meanwhile, the Centre has been fine-tuning related teaching and research goals in collaboration with other academic units at MPI.

中心本學年既為本院學生提供葡語教學,亦出版了《環球葡萄牙語(第四冊)》、《澳門翻譯史論》、《第三屆中國葡萄牙語教學國際論壇論文集》、《第四屆中國葡萄牙語教學國際論壇論文集》等。同時,還組織各類學術會議,包括:2017年11月在本院舉行的"Camilo Pessanha: novas interrogações (150 anos do nascimento)"座談會及"中國高校葡語課程負責人會議"。

目前,葡語及葡語系國家文化重要性越來越突出,中心不僅在對中國內地和澳門特別行政區的葡語教師培訓中發揮着舉足輕重的作用,還將在葡語國家經濟和文化交流中扮演重要角色,特別是在對本地和中國內地的葡語教師開展培訓。2018年2月至5月,中心連續四次為澳門教育暨青年局38名學員培訓葡萄牙語;2017年10月至2018年6月期間,連續七次為內地大學教師培訓葡萄牙語;開辦了"2018年葡語暑期課程",來自內地高校共21位葡語教師參與。

In addition to offering Portuguese language teaching to our students, the Centre published this year several books such as *Português Global (Series 4)*, *History of Translation in Macao*, *Actas do 3.° Fórum Internacional do Ensino da Língua Portuguesa na China*, and *Actas do 4.° Fórum Internacional do Ensino da Língua Portuguesa na China*. The Centre also held various academic conferences including the "Camilo Pessanha: Novas Interrogações (150 anos do nascimento)", and the "Conference for Portuguese Language Programme Coordinators from Higher Education Institutions in China" in November 2017 at MPI.

At present, the Portuguese language and the Portuguese-speaking countries are gaining increasing cultural importance. The Centre plays a significant role both in the training of teachers of Portuguese language in Mainland China and in Macao, and in the economic and cultural exchanges among Portuguese-speaking countries. It conducted 4 consecutive Portuguese language training sessions – between February and May 2018 – for 38 people from Macao's Education and Youth Affairs Bureau. The Portuguese Language Teaching and Research Centre also offered the equivalent training for educators of Mainland Chinese universities 7 times in a row; and opened the Portuguese Language Summer Course 2018 attended by 21 Portuguese teachers from higher education institutions in Mainland China.



為內地高校葡語教師開辦葡語暑期課程

Summer course on Portuguese for Portuguese-language teachers from China

#### 《澳門理工學報》

《澳門理工學報》(人文社會科學版)是本院的綜合性人文社會科學學術理論刊物,創辦於1998年。經過20年的發展,尤其是2011年全新改版以來,以學術厚重、品位高雅、特色鮮明、編輯規範的特點贏得海內外學術界、期刊界乃至社會各界的廣泛關注,其品牌欄目"名家專論"、"港澳研究"、"總編視角"、"中西文化"等,在學術界得到很高的評價。

自2011年改版以來,《澳門理工學報》博採眾家之所長,兼容並蓄,廣受讚譽。2014年榮獲"全國高校精品社科期刊"獎,被譽為高校學報陣營"異軍突起"的一匹"黑馬"。《清華大學學報》2017年第2期發表了《新華文摘》原總編輯張耀銘教授的《一本期刊與其崇尚的"海納百川"——〈澳門理工學報〉現象分析》一文,對《澳門理工學報》的欄目特色、專題策劃、學術質量和期刊風格做了詳盡的闡釋,並揭示了"《澳門理工學報》現象"對中國人文社會科學學術期刊轉型與發展的啟迪意義,引起學界高度關注。

## Journal of Macao Polytechnic Institute

The Journal of Macao Polytechnic Institute (the Humanities and Social Sciences Edition) was founded in 1998, and is an MPI-sponsored, comprehensive academic periodical covering humanities and social sciences. The journal adopted a new layout in 2011 and has since attracted widespread attention from academia, the periodical publishing industry and different social spectrums at home and abroad, for its academic rigour, style, distinct characteristics and high editorial standards. Its branded columns include "Monographs of Distinguished Scholars", "Hong Kong and Macao Studies", "Editor's Perspective" and "Sino-Western Cultural Studies", each enjoying high prestige in the academic community.

The new layout made the journal more inclusive, allowing it to integrate different strengths from a range of resources. It was listed as one of the Selected Social Science Periodicals of Higher Education Institutions in China as a dark horse in 2014. *Prof. Zhang Yaoming*, former Editor-in-Chief of *Xinhua Digest*, explained in detail the journal's features, planning for special topic writing, academic quality and style, and what the "phenomenon of the journal" could mean to the transformation and development of China's academic periodicals on humanities and social sciences, in his column "A Journal and It's Appeal to Great Breadth of Mind - An Analysis of the



"澳門理工學報叢書"首發式

Ceremony of 1st issue of Collection of Journal of Macao Polytechnic Institute



華文學術期刊轉型暨《澳門理工學報》創刊二十周年研討會嘉賓合影

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Group photo of guests at "Conference on Transformation of Chinese Academic Journals cum Celebration of 20th Anniversary of the founding of *Journal of Macao Polytechnic Institute*"

在中國人民大學 "複印報刊資料" 轉載指數排名中,《澳門理工學報》已連續五年穩居全國前列,2017年度轉載率和綜合指數均位列全國高校學報第7名。同時,不少佳作亦為《新華文摘》、《中國社會科學文摘》、《高等學校文科學術文摘》、人大"複印報刊資料"等知名刊物轉載。

2018年4月,為紀念學報創刊二十周年,特別舉辦"華文學術期刊轉型暨《澳門理工學報》創刊二十周年研討會",來自全國各地50餘位知名學術期刊主編和專家學者出席。同場,也舉行了由社會科學文獻出版社出版發行的"澳門理工學報叢書"首發式。該叢書至今已出版七卷,包括《名家專論》、《港澳研究》、《總編視角》、《中西文化》等,總字數逾450萬。

中西文化研究所

2017/2018學年,中西文化研究所開設常設學術講座 "三巴講壇",主講學者包括清華大學美術學院尚剛教授、 日本關西大學東亞文化研究內田慶市教授、澳大利亞昆士蘭 大學語言與文化學院陳平講座教授等多位海內外學術名家, 進行了8場歷史學、語言學、美術理論等方面的講座,聽眾 來自院內外師生、政府部門相關領域、社會相關團體成員以 及有興趣人士,收到良好效果。 Phenomenon of *Journal of Macao Polytechnic Institute* published in the *Journal of Tsinghua University* of Issue No. 2, 2017. The article attracted great attention in academic circles.

The Journal of Macao Polytechnic Institute placed high for 5 consecutive years in the rankings of the index of academic articles in the "Replicated Journals" released by Renmin University of China. It stood 7<sup>th</sup> of all the journals of higher education institutions in the 2017 rankings respectively in the replication index and the composite index. Many articles from the journal have been reprinted by prestigious periodicals such as Xinhua Digest, Chinese Social Sciences Digest, China University Academic Abstracts, and "Replicated Journals" of Renmin University.

In April 2018, the "Conference on the Transformation of Chinese Academic Periodicals cum Celebration of the 20th Anniversary of the Founding of *Journal of Macao Polytechnic Institute*" took place. It was attended by about 50 participants, including the editors-in-chief of renowned academic periodicals, experts, and academics from across the country. Meanwhile, a ceremony was held for the launch of the "Collection of the Journal of Macao Polytechnic Institute", published by the Social Sciences Academic Press. Until now, the seven volumes of more than 4.5 million characters features sections including *Monographs of Distinguished Scholars, Hong Kong and Macao Studies, Editor's Perspective* and *Sino-Western Cultural Studies*.

#### Centre of Sino-Western Cultural Studies

In the 2017/2018 academic year, the Centre of Sino-Western Cultural Studies launched a series of academic seminars under the title "San Pa Forum". The speakers included Prof. Shang Gang from the Academy of Arts & Design at the Tsinghua University; Prof. Keiichi Uchida, who focused on East Asian cultural research at Kansai University, in Japan; Prof. Chen Ping from the School of Languages and Cultures at the University of Queensland; and other famous domestic and overseas academics. They delivered 8 sessions of talks on history, linguistics, art theories among other topics to an audience composed of teachers and students from MPI and other education institutions, members of related Macao SAR Government departments and associations, as well as interested individuals. They ended with satisfactory results.



《孫中山在澳門》首發儀式

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Launch ceremony for the book Sun Yat-sen in Macao

2017年10月,由研究所撰寫並在《澳門日報》刊載的《孫中山在澳門》紀念特輯結集出版,在本院舉行了首發儀式。該書為"澳門記憶叢書"之一冊,是研究所在澳門本地歷史研究與科普方面的又一次成功嘗試。11月至12月相繼舉辦"澳門歷史文化研究的回顧與展室"國際學術研討會、"思索踐行:鄭觀應與近代中國"學術研討會暨《鄭觀應財政金融思想研究》發佈儀式、"同善堂與近代澳門"學術研討會等。

2018年5月,研究所與葡萄牙科英布拉大學歷史系在該系聯合舉辦"近現代的中國與葡萄牙:交匯與差異"會議。2018年6月,研究所與香港大學饒宗頤學術館、江門市文化廣電新聞出版局主辦、江門博物館聯合舉辦"一衣帶水——文物視角中的澳門與江門"圖片展。

In October 2017, the Centre launched a book compilation of its *Sun Yat-sen in Macao* special memorial articles that had been published in *Macao Daily* newspaper. As a volume in the "Macao Memory Series", the book was another successful effort by the Centre with regard to its research on Macao's history and the city's scientific community. From November to December, the Centre hosted several international conferences. They included: "Review and Outlook of Research on Macao's History and Culture"; "Conference 'Putting Thoughts into Practice: Zheng Guanying and Modern China' cum Launch Ceremony for *Studies of Zheng Guangying's Thoughts on Finance*"; and the conference "Tung Sin Tong and Modern Macao".

In May 2018, the Centre worked with the Department of History, Archaeology and Arts under the University of Coimbra in Portugal to organise the conference "China and Portugal in Modern and Contemporary Times: Convergence and Divergence". In June, the Centre held the photo exhibition "Linked Closely by a Narrow Strip of Water: Macao and Jiangmen from the Perspectives of Cultural Relics" in cooperation with, respectively, Hong Kong's Jao Tsung-I Academy; Jiangmen's Administration of Culture, Radio, Film, Television, Press and Publication; and the Jiangmen Wuyi Overseas Chinese Museum.

#### 社會經濟與公共政策研究所

社會經濟與公共政策研究所是澳門有一定影響力的學術研究單位,以提升學術研究水平為基本宗旨,以服務特區政府科學決策為基本使命。研究領域主要涉及澳門經濟與社會、澳門發展戰略、澳門特區政府管理與公共政策等。

本學年,研究所的研究人員一共發表學術論文42篇,包括:學術期刊論文21篇(其中核心期刊佔9篇),學術研討會論文15篇,報章評論6篇。

研究所還承擔並完成了多項政府交付的重要研究課題,有 些課題成果被政府相關部門採納,並受到相關部門的充分 肯定和評價。研究所的研究人員積極參與各項學術交流活 動,許多學術觀點產生了較大的影響,為提升學術研究水 平作出貢獻。

此外,研究人員積極參與本院的教學和學科建設,努力實現科研和教學的相互促進。研究所積極展開多項學術訪問和調研活動,增強與相關領域的學術交流,不斷促進研究能力的提升。



## Social, Economic and Public Policy Research Centre

As an influential academic research institute in Macao, the Social, Economic and Public Policy Research Centre aims to raise the quality of local academic research and accomplish the core mission of helping the Macao SAR Government devise policies in a scientific manner. Its research areas mainly involve Macao's economy and society, development strategies for Macao and the Macao SAR Government's administrative and public policies.

In this academic year, the Centre's researchers published 42 academic papers, of which 21 were carried in academic journals (9 in core journals); 15 were conference papers; and 6 were newspaper reviews.

The Centre also undertook and completed several research projects commissioned by the Macao SAR Government. Some research outputs of these projects have been duly affirmed, commended and adopted by relevant Macao SAR Government departments. The Centre's researchers have actively participated in various academic exchange activities, with many of their academic views having a great impact and contributing to advancing the quality of academic research in relevant fields.

The Centre's researchers have also been vigorously involved in the development of MPI's teaching and curriculum and in promoting a mutually-reinforcing relationship between research and teaching. The Centre used its initiative to organise a large number of academic visits and research activities, strengthened its academic exchanges with entities in related fields and continued to improve its research capabilities.

數據治理問題與挑戰學術研討會

Seminar on "Data Management: Problems and Challenges"

#### "一國兩制"研究中心

本學年,中心出版了《"一國兩制"研究》中文版4期,以及"一國兩制"文庫系列學術專著2冊。

中心於2017年11月舉辦 "一國兩制"高端論壇2017— 推動 "一國兩制"實踐行穩致遠";2018年3月協辦了由 澳門基本法推廣協會等聯辦的 "邁向澳門 '一國兩制'實 踐新征程——紀念《澳門基本法》頒佈25週年"學術研討 會;2018年6月舉辦了 "澳門理工學院 '一國兩制'研究 中心成立十周年暨 '維護中央全面管治權與保障特區高度自 治權'學術研討會"。

本學年還進行了多項學術活動:配合法務局就宣傳憲法和基本法,為其舉辦的"憲法與基本法專題講座"及"國是茶聊"小型討論會各進行了2次主講;於2017年11月舉行《2018年財政年度施政報告》學術座談會;2018年5月完成《"一國兩制"綜合指標》電話問卷民意調查;2018年8月舉辦了"澳門理工學院'一國兩制'研究中心成立十周年"學術座談會,以聽取業界就中心工作仍需改善之處及努力方向等意見;中心分別與到訪中心的內地及香港代表團進行學術交流座談;中心還積極參與本地及內地舉辦的多項會議、座談會及交流考察等活動。

## "One Country, Two Systems" Research Centre

The "One Country, Two Systems" Research Centre published 4 issues of the *Academic Journal of "One Country, Two Systems"* in a Chinese-language format and two monographs in its "One Country, Two Systems" series this academic year.

In November 2017, the Centre held the "'One Country, Two Systems' Advanced Forum 2017 - Promoting the Steady Implementation of 'One Country, Two Systems' Policy". In March 2018, it co-organised the "On A New Journey of Implementing the 'One Country, Two Systems' in Macao - Commemorating the 25<sup>th</sup> Anniversary of the Promulgation of the Basic Law of Macao" together with the Macao Association of Basic Law Promotion among and other organisations. In June, it hosted the "Celebration of the 10<sup>th</sup> Anniversary of the Founding of 'One Country, Two Systems' Research Centre of Macao Polytechnic Institute cum Conference 'Safeguarding the Central Government's Right of Overall Jurisdiction and SAR's High Degree of Autonomy".

The academic year also saw a number of academic activities. They included two talks that the Centre respectively delivered via the "Seminar on the Constitution and the Basic Law" and a discussion session on national affairs in support of the Legal Affairs Bureau's promotion of the country's constitution and the Basic Law; as well as an academic symposium on "Policy Address for the 2018 Fiscal Year" in November 2017; telephone polls on the composite indicators of "One Country, Two Systems" – completed in May 2018; and an academic symposium held in August 2018 under the title "10th Anniversary of the Establishment of 'One Country, Two Systems' Research Centre of Macao Polytechnic Institute". The latter involved gathering opinions from related sectors about possible enhancements to the Centre and about what should be its future direction. Moreover, the Centre had academic exchange sessions respectively with visiting delegations from Mainland China and Hong Kong, and actively participated in many conferences, symposiums, exchange tours and other events held in either Macao or Mainland China.

中心持續與行政公職局及澳門基本法推廣協會聯辦培訓對象為特區政府中高層公務員的"澳門基本法高級研討班課程",本學年共完成3班;以培訓對象為高級技術員、職務主管及技術員層次中級公務員的"澳門基本法研討班課程"則完成了11班。同時,參與了行政公職局開辦的"公務人員晉階培訓——達標式培訓課程"及"公務人員基本培訓課程(入職培訓)"兩項系列培訓課程中的"一國兩制"與《澳門基本法》相關單元課程,分別講授了21班及15班。

In this academic year, the Centre completed delivery of 3 classes for the course "Advanced Seminar on the Basic Law of Macao", co-organised with the Public Administration and Civil Service Bureau and the Macao Basic Law Promotion Association. The classes were aimed at civil servants in middle and senior positions. The Centre also delivered 11 classes for the course "Seminar on the Basic Law of Macao" for the Macao SAR Government senior technicians, functional heads and middle-ranking officials at technician level. Meanwhile, the Centre engaged in induction training organised by the Public Administration and Civil Service Bureau, namely the "Advanced Training for Civil Servants - Qualified Training Courses" and the "Basic Training Course for Civil Servants". The Centre was responsible for 21 classes on "One Country, Two Systems" and 15 classes on "The Basic Law of Macao" in the induction training.



"一國兩制"研究中心成立十周年學術座談會

Seminar on the 10th Anniversary of the Founding of the "One Country, Two Systems" Research Centre



## 澳門語言文化研究中心

澳門語言文化研究中心自成立以來開展的科研工作、舉辦的研討會及講座等均卓有成效,在海內外產生了較大的影響。中心於2017年出版了《澳門語言文化研究(2016)》;中心簡報第七期亦已出版。研究項目"繁華落盡一書生——王雲五先生平傳"已編輯成書出版。

2017年10月,中心舉辦題為 "語言與現代化" 的學術研討會。來自兩岸三地、海外等40餘位專家學者出席,探討澳門的現代社會生活語言狀況,並就現代化語言問題進行研討。

中心研究人員積極從事學術研究,撰寫了大量學術論文,同時經常參與海內外有關語言文化研究的研討會並發表論文, 與各方專家學者廣泛交流,從而得到更多在語言文化研究領域的意見。

中心廣受澳門各界的關注,有不少在語言文化專業的翹楚到 中心舉行講座、學術報告、工作坊等,與中心及全院的師生 進行學術交流,有些演講主題的內容更對澳門的語言規劃與 語言政策有着很大的裨益及影響。

## Language and Culture Research Centre of Macao

Since its establishment, the Centre has organised a series of research activities, conferences and seminars, which have achieved remarkable success and had a significant impact at home and abroad. In 2017, it published *Macao Languages and Cultural Studies (2016)*. The year 2017 marked the seventh edition of such a publication. The Centre also produced a book entitled *Prosperous and Fulfilled Scholar - Commentary on Wang Yun-wu's Academic Thought*.

In October 2017, the Centre held a conference on "Language Skills and Language Services", where more than 40 experts and scholars from the cross-strait regions and from overseas countries discussed the linguistic conditions in modern Macao society and language modernisation within the community.

Researchers of the Centre actively engaged in academic research and produced a substantial number of academic papers. They regularly took part in conferences in and outside Macao concerning language and cultural studies. They also published papers and exchanged opinions with experts and academics from various institutions, gaining in the latter instances a great deal of advice on their research into language and culture.

The Centre attracted widespread attention from across Macao, with many prominent thinkers in the fields of language and culture holding seminars and workshops, delivering academic reports at the Centre, and engaging in academic exchanges with MPI teachers and students. Some of their talks were of benefit to, and had a positive impact on, language-related matters and public policy within Macao on language-related issues.

# 理工一倫敦大學瑪麗皇后學院 資訊系統研究中心

理工一倫敦大學瑪麗皇后學院資訊系統研究中心專注於資訊科技領域的尖端技術研究。作為兩校合作典範,自2004年成立以來致力於概念驗證及實用原型系統等方面的研究及系統集成,藉此促進澳門的資訊科技發展,為澳門社會與民生作出貢獻。

目前中心的一項研究是面向未來5G無線通信的一個關鍵技術:網絡切片技術。中心的研究集中在動態的網絡切片技術,以及如何將整個無線頻譜資源進行最優分配。中心使用了博弈論方法優化頻譜分配,在保持網絡切片正交,且負載不均匀的環境中得到了比傳統固定網絡切片技術更加高效的資源分配結果。



中心另一個最近的研究是關於空氣質量監測的數據處理方面,具體研究如何在測量得到的大量室內及室外數據,以及由於測量儀器從室內轉到室外過程中產生的大量 "噪音"數據中,分辨出有用的監測數據。中心使用了幾種不同的聚類算法成功分離了在澳門測量的室內外空氣監測數據。這項研究的意義在於當大量的監測數據需要分類時,可以自動完成數據分類,從而不需要測量人員進行大量且繁重的數據標籤工作。

中心獲得了澳門科學技術發展基金、澳門特區政府電信管理局等機構提供研究專項經費。研究成果獲資訊科技領域重要的學術期刊或會議發表,自成立以來,中心人員獲工程索引(EI)或科學引文索引(SCI)刊物發表之學術論文超過100多篇,在2017/2018學年共發表9篇相關論文。

# MPI-QMUL Information Systems Research Centre

Focusing on various cutting-edge technologies in Information Technology, the MPI-QMUL Information Systems Research Centre (ISRC) is a joint research laboratory between Macao Polytechnic Institute and Queen Mary University of London. Approved by the Macao SAR Chief Executive in 2004, its scope includes research and systems integration to the level of proof-of-concept demonstrators or operational prototypes in closely inter-related Information Systems technologies.

One aspect of the research is on key technology being proposed for 5G: Network Slicing. The network is "sliced" logically into multiple virtual networks in the frequency domain, with each slice handling one or more services, so allowing networks to be logically separated. Work in the Centre has considered dynamic resource sharing that allows optimisation of overall resources and has shown that a game-theoretic approach for network slicing supporting full spectrum sharing, while retaining orthogonality between slices, will lead to more efficient networks because resources would be wasted in fixed slices when there is an unbalanced load.

Another recent topic has been on post-processing air pollution data to clearly identify outdoor clusters, by removing indoor data and "noise" caused by air from indoors mingling with air from outdoors. Several different clustering algorithms have been compared using data from measurements in Macao and outdoor data has been successfully. Such a technique simplifies the collection of large data sets since the person taking the measurements does not have to make any advance decisions about what is pure outdoor, or pure indoor, data.

Funding for the research of the ISRC has been obtained from a number of bodies including the Macao SAR Government, FDCT Macao and DSRT and the output of the research has been published in major conferences and journals – over 100 Elindexed or SCI-indexed publications since the Centre started and 9 in 2017/2018 academic year.

#### 學術成果

### 學術論文

隨着本院快速的發展及教研人員不懈的努力,多年來本院人員合共發表了學術論文2,394篇,SCI、SSCI、AHCI、EI等引文索引刊物的論文共406篇,中文核心期刊發表的論文542篇。本學年,本院人員共發表了學術論文125篇,其中SCI、SSCI、AHCI、EI等引文索引刊物的論文共47篇,部分更刊登在 Computers in Human Behavior、Current Anthropology、Europea Journal of Preventive Cardiology、Frontiers in Physiology、Journal of Cleaner Production、Population Health Metrics等在學科內影響力因子排名前30%的期刊上。

中文核心期刊發表的論文共37篇,刊登在《人民音樂》、《上海行政學院學報》、《上海師範大學學報(哲學社會科學版)》、《中國中藥雜誌》、《中國醫院》、《中國醫藥導報》、《中華預防醫學雜誌》、《中華醫院感染學雜誌》、《青年探索》、《理論探討》、《南方醫科大學學報》、《計算機與應用化學》、《現代泌尿生殖腫瘤雜誌》、《故宮博物院院刊》、《護理學雜誌》、《歷史檔案》、《廣東行政學院學報》、《臨床泌尿外科雜誌》、《圖書館學研究》等刊物上;本地及國際會議論文54篇;書章24篇;報刊雜誌論文29篇。

被國際知名引文數據庫Scopus索引的本院人員學術文章共 38篇,研究範圍涉及農業和生物科學、藝術與人文、生物 化學、遺傳學和分子生物學、商業、管理和會計、計算機科 學、能源、工程、環境科學、數學、醫學、看護、藥理學、 毒理學和藥劑學、物理與天文學、心理學和社會科學等。

## **Academic Outputs**

#### **Academic Articles**

With the Institute's rapid development and the unremitting efforts of our academic staff, a total of 2,394 academic articles has been published. Among the tally, 406 articles and 542 articles were published in the journals of, respectively, the Science Citation Index (SCI); the Social Sciences Citation Index (SSCI); the Arts and Humanities Citation Index (AHCI); and the Engineering Index (EI) as well as in core Chinese academic journals. In this academic year, our academic staff published an aggregate of 125 academic articles, among which 47 were published respectively in the journals of the SCI, SSCI, AHCI and EI and other internationally-recognised, citation-indexed journals. Some articles were published in the top 30% of journals ranked by impact, including but not limited to Computers in Human Behavior, Current Anthropology, European Journal of Preventive Cardiology, Frontiers in Physiology, Journal of Cleaner Production, and Population Health Metrics.

A total of 37 articles was published in core Chinese journals, including: *People's Music; The Journal of Shanghai Administration Institute; Journal of Shanghai Normal University (Philosophy Social Sciences Edition); China Journal of Chinese Materia Medica; Chinese Hospital; China Medical Herald; Chinese Journal of Preventive Medicine; Chinese Journal of Nosocomiology; Youth Exploration; Theoretical Investigation; Journal of Southern Medical University; Computers and Applied Chemistry; Journal of Contemporary Urologic and Reproductive Oncology; Palace Museum Journal; Journal of Nursing Science; Historical Archives; Journal of Guangdong Institute of Public Administration; Journal of Clinical Urology and Researches in Library Science; and other publications. There were also 54 local and international conference papers, 24 book chapters and 29 articles published respectively in newspapers, magazines and other periodicals.* 

A total of 38 academic articles was indexed by Scopus, a renowned international indexing database, covering areas including agriculture and biological sciences, arts and humanities, biochemistry, genetics and molecular biology, business, management and accounting, computer science, energy, engineering, environmental science, mathematics, medicine, nursing, pharmacology, toxicology and pharmacy, physics and astronomy, psychology and social sciences.

#### 出版物

本院出版的學術著作共32項,範疇涵蓋"一國兩制"、高等教育、文化、歷史等與澳門息息相關的研究。此外,為發展葡語教育及培育中葡雙語人才,本院出版一系列的葡語教學新書,包括有《葡語動詞實用手冊》、《説説唱唱》、《通過文學作品學葡語》、《中國學生葡萄牙語詞彙學習教材》及《多用途葡萄牙語寫作教程》等。

《葡語動詞實用手冊》—— 突顯葡語動詞的複雜性,以及 這種複雜性在句子中的種種表現。本書不僅顯露不同語言 間巨大的差異,而且也特別闡述母語是中文的人在學習葡 語時所要注意的事宜。

《說說唱唱》——本書是通過唱歌的藝術手段來學習葡語的發音,通俗而易於接受的學習方法。另一部分就是通過語音學習葡語詞彙及文化。

《通過文學作品學葡語》——結合葡語教學與葡語文學作品,是語言教學中最常見的學習方法。

《中國學生葡萄牙語詞彙學習教材》——是一本非常實用的詞彙工具書,它可使學習者一步一步地學習葡語,獲取詞彙,演繹詞彙的變化,並將其付諸於實踐。

《多用途葡萄牙語寫作教程》——闡述葡語書面語的複雜性,以及語言和文字方面的要求。同時,也介紹不同場合和不同活動所需要的特殊的語言表達。

由院外出版機構出版的書目共17項,部分更由權威出版社中國人民大學出版社、廣東人民出版社等出版。本院定期出版的學術刊物有《澳門理工學報》(人文社會科學版)和《"一國兩制"研究》(季刊)。

#### **Books and Other Publications**

An aggregate of 32 academic monographs has been published by MPI, covering topics such as the "One Country, Two Systems" policy, higher education, culture, history and other themes that are closely related to Macao's development. In order to enhance the development of the teaching of the Portuguese language, and to nurture talented people bilingual in Chinese and Portuguese, MPI published a series of textbooks for those learning the Portuguese language. They are: Manual Prático de Verbos Portugueses; Sons da Fala e Sons do Canto; Português com Textos; Vocabulário do Português para Alunos Chineses; and Escrever para Diferentes Finalidades, among others.

Manual Prático de Verbos Portugueses underlines the complexity of verbs in Portuguese, as well as the various ways the verbs manifest themselves in sentences. The book not only reveals the huge differences among different languages, but also specifically addresses issues to which Chinese speakers should pay attention when learning Portuguese.

Sons da Fala e Sons do Canto assists learners to learn pronunciations through the art of singing, which is a more easy-to-accept way of language learning, while learners are able to study vocabulary and Portuguese culture through pronunciation.

*Português com Textos* combines language teaching with literature in Portuguese, which is the most common learning method in language teaching.

Vocabulário do Português para Alunos Chineses is a very practical vocabulary tool that allows learners to learn Portuguese step-by-step, ranging from memorisation of vocabulary, interpreting the changes of words, to actually practising the language.

Escrever para Diferentes Finalidades illustrates the complexity of the Portuguese written language, as well as requirements in terms of language and text themselves. Meanwhile, the book also introduces various special expressions used for various occasions or activities.

MPI has partnered with outside publishing houses and has worked on 17 different book publishing projects in total. Some of the projects have been realised by linking with authoritative publishers such as China Renmin University Press, or Guangdong People's Publishing House. Our periodical academic journals include the *Journal of Macao Polytechnic Institute (Humanities and Social Sciences)* and *Academic Journal of "One Country, Two Systems"* (quarterly).

#### 科研投放

本學年獲批的學院資助科研項目共10項,研究領域涵蓋博彩、醫療衛生、人才培養、教育、社會工作等,資助金額共澳門幣1,167,790元。

為鼓勵教師與環球學者進行學術交流,本院為參加國際學術會議發表成果的教師提供與會經費資助。本學年批准與會資助申請69項,資助總額為澳門幣1,271,669.60元,發表論文69篇,涉及的學術領域廣泛,涵蓋教育、文學、歷史、博彩、公共行政、翻譯、資訊科技、藝術、體育、護理學、心理學等。

### 外界資助/委託

作為一所服務澳門社會的應用型高等院校,本院每年均獲多個政府部門或社福機構委託、資助或透過公開招標的方式進行項目研究。本學年獲政府部門及社福機構等委託的研究項目共6項,範疇包括:博彩、健康評估、文創產業、精神康復等。此外,本學年獲科學技術發展基金資助經費的研究項目共2項。

本學年,本院與中國科學院合作的科研項目分別獲國家自然科學基金及澳門科學技術發展基金聯合資助,經費總額約澳門幣3,000,000元。

## Research Input

A total of 10 internal research items was approved and funded by MPI in this academic year, with research areas covering gaming, health care, talent development, education, social work and more. The total amount of funding reached MOP 1,167,790.

As an encouragement and support to our teachers to join academic exchanges with global scholars, MPI provides subsidies to those who attend and share research results in international academic conferences. An aggregate of 69 projects received financial support from MPI, while the total grant disbursed amounted to MOP 1,271,669.60, with the conferences covering a wide range of areas, from education, literature, history, gaming, public administration, and translation, to information technology, art, sports, nursing, psychology and other topics.

## **External Funding / Commissions**

As a practically-focused institution of higher education serving the community of Macao, MPI is commissioned, funded or supported via the winning of open tenders by a number of government departments each year, to conduct research. In the 2017/2018 academic year, a total of 6 key research projects, in the areas of gaming, health assessment, cultural and creative industries, mental rehabilitation and others, was commissioned by various government departments and institutions. Moreover, there were 2 project grants from the Fund for the Development of Science and Technology (FDCT, in the Portuguese-language acronym).

In this academic year, research projects conducted jointly by MPI and the Chinese Academy of Sciences were jointly funded by the National Natural Science Foundation of China and FDCT, with an aggregate of MOP 3,000,000.