



澳門理工大學  
Universidade de Macau  
University of Macau

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UNIVERSIDADE DE  
COIMBRA

Laboratório Conjunto de Investigação em Tecnologias Avançadas  
para Cidades Inteligentes UPM-UC

MPU-UC 智慧城市先進技術聯合實驗室

MPU-UC Joint Research Laboratory  
in Advanced Technologies for Smart Cities

# 科學研究 SCIENTIFIC RESEARCH

## 人工智能

### 中葡智慧城市先進技術聯合實驗室在葡萄牙正式揭牌

“澳門理工大學—科英布拉大學智慧城市先進技術聯合實驗室”揭牌儀式於2023年5月26日在葡萄牙科英布拉大學舉行。社會文化司歐陽瑜司長、科英布拉大學 Amílcar Falcão 校長及嚴肇基校長共同為實驗室揭牌，進一步促進中國與葡語系國家教育及科技合作，發揮澳門中葡平台作用，助力澳門智慧城市及粵港澳大灣區科技創新走廊的建設。聯合實驗室發揮雙方在教育及資訊科技領域優勢，加強澳門與葡萄牙高校在科學研究領域的合作；同時，透過對智慧城市發展具有高影響價值的計算機科學、人工智能和信息通信技術領域開展聯合研究及應用，為澳葡兩地培養青年研究人才，促進兩地的國際學術和研究交流，助力建設智慧科技協同創新生態。

### 新成立“人工智能藥物發現中心”

大學應用科學學院“人工智能藥物發現中心”於2022年成立，為澳門的中西藥物研發構建一個嶄新平台。中心的五大目標為：培養高層次跨學科複合型應用性技術人才；應用人工智能加強國家藥物發現學術基礎；配合國家藥物工業豐富併發展新藥物管線；孵化潛在人工智能藥物發現受託研究機構；孵化潛在科技驅動高新初創生物科技企業。中心致力推動人工智能估算、藥物評價系統、專利保護及技術轉化、技術評估及估值、以及產學研合作實際操作，為澳門的醫藥學發展譜寫新篇章。

## Artificial Intelligence

### MPU-UC Joint Research Laboratory in Advanced Technologies for Smart Cities Officially Inaugurated in Portugal

The MPU-UC Joint Research Laboratory in Advanced Technologies for Smart Cities was officially inaugurated at the University of Coimbra (UC) on 26 May 2023. Ao leong U, Secretary for Social Affairs and Culture; Professor Amílcar Falcão, Rector of UC; and Professor Im Sio Kei, Marcus, Rector of MPU, jointly inaugurated the Laboratory. It is hoped that the Laboratory will further promote cooperation between China and Portuguese-speaking countries in education and technology, and leverage Macao's role as the Sino-Portuguese Platform between China and Portuguese-speaking countries to facilitate the development of Macao as a smart city and the Guangzhou-Shenzhen-Hong Kong-Macao science and technology innovation corridor. The Laboratory will leverage the strengths of both parties in education and information technology to bolster cooperation between Macao and Portuguese universities in the field of scientific research. Moreover, it will carry out joint research and application projects in computer science, artificial intelligence, information and communications technology, as well as fields that have great impacts on smart city development. It aims to cultivate young researchers in Macao and Portugal, promote international academic and research exchanges between the two sides, and help build an ecosystem for collaborative innovation in smart technologies.

### Establishment of the Centre for Artificial Intelligence Driven Drug Discovery

Since its establishment in 2022, the Centre for Artificial Intelligence Driven Drug Discovery (AIDD) of the Faculty of Applied Sciences of MPU has launched a new platform for the research and development of Chinese and Western drugs in Macao. The Centre has five major goals: cultivate high-level interdisciplinary technical talents; apply artificial intelligence to develop academic excellence in driven drug discovery in China; collaborate with the national pharmaceutical industry to enrich and develop new drug pipelines; incubate potential AI-driven drug discovery commissioned research organizations; and incubate potential technology-driven high-tech start up biotechnology companies. The Centre is committed to promoting AI cost estimation, drug evaluation systems, patent protection and technology transfer, technology evaluation and valuation, as well as the practice of industry-university-research collaboration, writing a new chapter for medicine and pharmaceutical development in Macao.

## 電動車及智能建築管理研究 建設宜居城市

大學應用科學學院與國際知名大學合作組成國際研究團隊，開展跨學科、創新性應用研究，提升電動車及電池潛能，為可持續交通發展貢獻智慧。包括：聯同意大利博洛尼亞大學、美國加州大學洛杉磯分校組成科研團隊，合作研發聯網監控系統技術，於配備車載診斷系統（OBD-II）的電動車上，透過人工智能及特定監控算法，收集分析數以萬計高頻率的相關數據。有關系統配備機器學習技術，硬件設計成本低，效益高，實時監控車輛運行狀態及回報異常。聯同香港大學、香港理工大學，以及英國基爾大學學術人員開展智能建築相關跨領域研究，分別對建築專業人士及大樓用戶進行調查，分析不同持份者對各項智能特性的關注度和認受性，務求增加樓宇設計、施工和管理效益，以可持續的方式締造“智慧”生活模式，與自然環境互惠共生。研究團隊多年來在環境管理、智慧城市等範疇開展跨學科研究，綠色建築群融合創新科技的智慧，有助更高效、更具規模地節省能源、水資源及建造材料，為用戶提供愜意合適的環境，提升他們的身心健康、幸福感和生產力，達至可持續發展城市的目標。

## Building a Livable City Through Research on Electric Vehicles and Smart Building Management

The Faculty of Applied Sciences of MPU has worked with internationally-renowned universities to form an international research team which engages in interdisciplinary and innovative applied research to unlock the potential of electric vehicles (EV) and their batteries, and to enhance sustainable, clean and energy efficient transport. Specifically, it has developed connected monitoring system technology in collaboration with the University of Bologna and the University of California, Los Angeles. By leveraging the On-Board Diagnostic Version II (OBD-II) EV data, the researchers analysed tens of thousands of high-frequency data being collected through artificial intelligence and monitoring algorithms. Such a system is equipped with machine-learning technology with high-efficient and low-cost hardware design, performing real-time monitoring and abnormality reporting. MPU also teamed up with the University of Hong Kong, Hong Kong Polytechnic University and Keele University, UK to launch interdisciplinary research related to smart buildings. Based on the surveys conducted respectively on construction professionals and building occupants, the research team offered insights on stakeholders' perceived importance and acceptance of various smart and sustainable building features. The research results benefit the efficiency of building design, construction and management, and develop a "smart" lifestyle to sustain the betterment of people and the natural environment. Over the years, the research team has conducted interdisciplinary research in the areas of environmental management and smart city. The green building complex integrates the wisdom of innovative technology to help save energy, water resources and construction materials more efficiently, providing occupants with a comfortable and suitable environment, enhancing their mental and physical health, as well as their happiness and productivity which contributes to the development of a sustainable city.

## 中葡平台

### 與北京大學及科英布拉大學合作向葡語國家出版葡語中醫藥教材

2023年5月大學為推廣中醫藥在葡語國家地區的應用，與北京大學醫學部及科英布拉大學簽署合作協定，共同開展中醫藥及保健書刊的翻譯出版工作。由北京大學醫學部提供中醫藥及保健中文書刊，大學進行中葡翻譯，科英布拉大學負責出版發行，並在葡語國家及地區進行宣傳推廣。三方致力為中醫藥文化開拓葡語市場，促進中華傳統文化及大健康產業成果邁向國際化發展。

### 推出新版“Diz Lá! 中葡通”手機應用程式

為進一步優化澳門中葡平台及中葡雙語人才培養基地作用，深化中葡雙語學習交流和資訊互通，大學於2022年12月正式推出“Diz Lá! 中葡通”手機應用程式5.0版本。相比原有版本，新版“Diz Lá! 中葡通”進行了全面更新，新增大量與中葡文化相關的詞彙分類，並配備歐洲葡語真人發音功能。新版“Diz Lá! 中葡通”手機應用程式秉承舊版廣受好評的特色功能，提供包括常用情境會話、常用詞彙、動詞變位查詢、趣味視頻以及詞彙測驗等板塊。其中常用詞彙板塊在原有分類基礎上，新增大量與中葡文化相關的詞彙分類，例如：中國二十四節氣、澳門美食、茶文化、酒文化、澳門世界遺產等。

## Cooperation Platform between China and Portuguese-speaking Countries

### Cooperation with Peking University and University of Coimbra (UC) to Publish Portuguese Traditional Chinese Medicine (TCM) Textbooks in Portuguese-speaking Countries

In May 2023, MPU signed a cooperation agreement with the Peking University Health Science Center and the University of Coimbra (UC) on the translation and publication of books related to Traditional Chinese Medicine (TCM) and healthcare in order to promote the application of TCM in Portuguese-speaking countries and regions. The Peking University Health Science Center will provide Chinese books on TCM and healthcare. MPU will translate the books from Chinese into Portuguese. UC will publish, distribute and promote the translated books in Portuguese-speaking countries and regions. The three parties aim to expand the market for TCM culture in Portuguese-speaking countries and regions, and promote the international development of traditional Chinese culture and big health industry achievements.

### Launch of New Version of “Diz Lá!” App

In an effort to elevate the role of Macao as the Cooperation Platform between China and Portuguese-speaking countries and the Chinese-Portuguese Bilingual Talent Training Base, and further promote bilingual learning and information exchanges between Chinese and Portuguese-speaking countries, MPU officially launched the “Diz Lá!” App Version 5.0 in December 2022. Compared to the previous version, the newly-launched “Diz Lá!” App has been fully updated, adding a large number of new vocabulary categories related to Chinese and Portuguese cultures and is now equipped with a new functionality of authentic European Portuguese pronunciation. The “Diz Lá!” App Version 5.0 maintains the popular features of the previous version, consisting of functionalities such as common situational conversations, commonly used vocabulary, verb conjugation lookup, interesting videos and vocabulary quizzes. In the commonly used vocabulary section, a large number of new vocabulary categories related to Chinese and Portuguese cultures, including the 24 solar terms of the traditional Chinese calendar, Macao cuisine, tea culture, wine culture, and World Heritage sites in Macao, have been added to the existing ones.

## 舉辦中葡名家專題講座

為充分發揮澳門對接葡語國家窗口作用，分享交流粵港澳大灣區和橫琴粵澳深度合作區建設背景下的中葡合作新方向，加強中葡文化交流，大學舉辦多場由中葡名家和專家學者主講的專題講座，包括：由大學名譽教授科英布拉大學文學院前院長卡洛斯·安德烈及葡萄牙科英布拉大學文學院助理教授二十世紀跨學科研究中心（CEIS20）研究員阿納貝拉·費爾南德斯主持“跨文化符號學景觀：中國與葡萄牙之對話”學術研討會；由葡語教學及研究中心 Ivo Manuel Veiga Carneiro de Sousa 副教授主講“澳門與大灣區的歷史形成 (1700-1842)：獨特貿易體系的文化投影”及“國際大都市的過往：澳門文化史中的貿易、旅行、休閒與自由 (1750-1900)”講座。

## 博彩及旅遊

### 舉辦“2022 旅遊娛樂科技創新年會”

為提升旅遊競爭力和可持續發展貢獻力量，助力澳門建設世界旅遊休閒中心，打造兼具旅遊娛樂和科技創新特色的“魅力澳門”，博彩旅遊教學及研究中心於 2022 年 10 月舉辦“2022 旅遊娛樂科技創新年會”，匯聚澳門旅遊休閒娛樂綜合企業、娛樂設備科技公司和科網協會等十六家機構及業界，圍繞“構建智慧旅遊娛樂之都”、“博彩科技產業新態勢”、“虛擬實境：旅遊體驗新走向”等專題，共同探討旅遊娛樂科技創新的前沿發展，提升澳門綜合旅遊競爭力，助力建設世界旅遊休閒中心。

## Sino-Portuguese Celebrities Lectures

To fulfill Macao's role as a crucial link between China and Portuguese-speaking countries, MPU held a series of lectures by Sino-Portuguese celebrities to explore new orientations in bilateral cooperation and enhance cultural exchanges within the framework of the development plans of the Guangdong-Hong Kong-Macao Greater Bay Area and the Guangdong-Macao In-Depth Cooperation Zone in Hengqin. Lectures included: the Academic Seminar on "Cross-cultural Semiotic Landscapes: China-Portugal Dialogues (Paisagens semiótica-culturais: diálogos China-Portugal)" chaired by MPU Honorary Professor Carlos André, former Dean of the Faculty of Letters of the University of Coimbra (UC), and CEIS20 researcher Anabela Fernandes, Assistant Professor of the Faculty of Letters of UC; Seminars on "Macao and the Historical Formation of the Greater Bay Area (1700-1842): Cultural Cartography of a Unique Trading System" and "A Cosmopolitan Past: Trade, Travel, Leisure and Indulgence in the Cultural History of Macao (1750-1900)" delivered by Associate Professor Ivo Manuel Veiga Carneiro de Sousa of the Centre for Portuguese Studies of MPU.

## Gaming and Tourism

### Annual Conference on Tourism and Entertainment Technology Innovation 2022

In order to enhance the competitiveness of local tourism, the sustainability of the development of Macao, and to build a "Glamorous Macao" as a world centre of tourism and leisure with tourism entertainment and technology innovation, the Centre for Gaming and Tourism Studies (CJT) of MPU held the Annual Conference on Tourism and Entertainment Technology Innovation 2022 in October 2022. Sixteen entities comprising integrated tourism, leisure and entertainment enterprises, gaming equipment technology companies and technology network associations were invited to exchange ideas on topics such as "Building a City of Smart Tourism & Entertainment", "Latest Developments of Gaming Technology Industry", and "Virtual Reality – The New Trend of Travel Experience". At the Conference, participants offered insights into the cutting-edge development of tourism and entertainment technology innovation to enhance the overall tourism competitiveness of Macao, thus making contributions to Macao's development into a world centre of tourism and leisure.

## 進行博彩旅遊相關研究項目

為促進澳門博彩旅遊行業的發展，博彩旅遊教學及研究中心積極進行多項學術調研及研究項目，包括：“澳門博彩人員服務專業化趨勢調研”、“莊荷工作壓力的前因後果以及工作流動性的調節作用”、“綜合娛樂場度假村吸引力構成要素及其影響因素研究：以澳門為例”、“澳門莊荷職業發展研究”及“基於灣區產業融合的澳門旅遊產業發展研究”等，為政府和博彩旅遊企業未來發展的科學決策提供支持。

## 開展學術專業活動

為加深學生對尖端科技應用於博彩旅遊和其他商業領域的理解和認識，博彩旅遊教學及研究中心開展多方面的教學及專業培訓活動，包括：“高科技系列講座”、“亞洲博彩市場系列講座”，以及一系列的“博彩與娛樂管理專題講座”，邀請本地學者及業界專家主講，主題包括：“亞洲博彩業的發展”、“綜合度假村項目設計”、“博彩科技：娛樂設備及系統”、“區塊鏈與粵港澳大灣區產業創新”和“澳理大舉辦賭博失調防治服務專題講座”等。

## Research Projects Related to Gaming and Tourism

In order to promote the development of the gaming and tourism industry in Macao, CJT proactively conducted a number of academic and research projects, namely, “Research on the Trend of Professionalization of Gaming Personnel in Macau”; “Antecedents and Consequences of Casino Dealers’ Work Stress and the Moderating Role of Job Mobility”; “Research on Attractive Elements and Key Factors Affecting Integrated Resorts: Take Macao as an Example”; “Research on Casino Dealers’ Career Development in Macao”; “Research on the Development of Macao Tourism Industry based on the Industrial Integration in the Bay Area”; among others, providing support for scientific decision-making for the future development of the government and gaming and tourism enterprises.

## Academic Events

To enrich students’ in-depth understanding in the application of cutting-edge technologies in gaming, tourism and other business sectors, CJT launched a variety of gaming-related academic and professional training programmes, including: the “High-Tech Seminar Series” and the “Asian Gaming Markets Seminar Series”. In addition, it organised a series of keynote speeches on “Administration in Gaming and Recreation Management”, whereby local scholars and industry experts were invited to give speeches on such topics as “Development of Asian Gaming Industry”, “Project Design for Integrated Resorts”, “Gaming Technology: Gaming Machine and Systems”, “Blockchain and Industrial Innovation in Guangdong-Hong Kong-Macao Greater Bay Area”, and “Seminar on Gambling Disorder Prevention and Treatment Services by the University”.

## 文化創意

### 推動校園及社區文創發展

大學結合校園內外的相關文化創意產業資源，推動校園及社區文創發展。本學年，舉辦了一系列文化創意活動，包括：“開物：探勘”設計作品展、“具現化”2022 澳門理工大學視覺藝術版雕展、“從藝術出發 - 陶藝創意 DIY 工作坊”、“空間與造型”教學成果展、“破格”澳門理工大學視覺藝術課程大三聯展、“耦合”跨領域創意實踐展、“Pluralism”澳門理工大學藝術及設計學院畢業作品聯展 2023、“燃光 I”、“燃光 II”及“燃光 III”澳門理工大學視覺藝術學生作品展，以及多場學生音樂會，包括“秋韻”音樂會、“春頌”音樂會等。此外，大學亦邀請國內外文創業界代表或藝術家主持專題講座，分享設計理念和實踐經歷，包括：“從地域振興考察設計新價值的創造與未來”、“民俗學和設計學”、“冬奧會‘冰墩墩’設計策略”、“大灣區品牌設計實踐分享會”等。大學於 2022 年 10 月成立“理工大學樂團”，旨在豐富學生的課餘藝術活動及增加校園音樂氛圍。

### 出版《是藝者》探索藝術新生代的創作思考與實踐

藝術及設計學院於 2023 年 2 月出版《是藝者——談澳門藝術新生代的創作思考與實踐》新書。該書由黎美琪和梁飛燕主編，結集了五位視覺藝術課程畢業生的採訪思考，介紹其在藝術創作與藝術教育並行的路上，如何帶領新生代的年青學子走出教室；同時，訪談澳門從事藝術創作、藝術教育、藝術策展的前輩、畢業生和同路人，一起思考與探索澳門藝術創作的實踐道路，展望藝術教育的未來發展方向。

## Cultural and Creative Industries

### Cultural and Creative Development on Campus and in Communities

MPU has drawn on relevant internal and external resources from cultural and creative industries to promote the development of cultural and creative industries on campus and in the community. In this academic year, MPU held a variety of cultural and creative events, including: “The Journey of Experimenters” Design Exhibition; “Conjuration”, the 2022 Macao Polytechnic University Visual Arts Programme Printmaking and Sculpture Exhibition; “Starting from Arts – Creative DIY Workshop on Ceramic Arts”; Teaching and Learning Achievement Exhibition of “Space and Structure”; “Unconventional”, the Third-Year Students of Bachelor of Arts in Visual Arts Programme of MPU Joint Exhibition; “Coupling” Crossover Creative Practice Exhibition; “Pluralism”, MPU Faculty of Arts and Design Graduate Show 2023; “Light Up I”, “Light Up II” and “Light Up III”, Macao Polytechnic University Visual Arts Student Works Exhibitions. It also held a number of university concerts, such as Music Autumn Gala Concert and Music Spring Gala Concert. In addition, MPU invited domestic and overseas experts and artists from cultural and creative industries to deliver keynote speeches and share their design concepts and practical experiences, such as: “Exploring the Creation and Future of New Value of Design from the Perspective of Regional Revitalisation”; “Folklore and Design”; “Design Strategy of ‘Panda Bing Dwen Dwen’ of 2022 Winter Olympics”; and “Greater Bay Area Brand Design Practice Sharing Session”. In October 2022, MPU established the MPU Orchestra, with the aim of enriching students’ extracurricular activities in the arts and enhancing the music atmosphere on campus.

### Artists to Be – About the Creative Thinking and Practice of the New Generation of Macao Artists

In February 2023, the Faculty of Arts and Design of MPU published a new book titled *Artists to Be – About the Creative Thinking and Practice of the New Generation of Macao Artists*. Edited by Mei-Kei Lai and Fei-In Leng, the book encompasses interviews with five visual arts graduates, showcasing how they have devoted themselves to artistic creation and art education and have led a new generation of students to explore outside of the classroom. It also includes interviews with experienced and young artists engaged in artistic creation, art education and art exhibitions in Macao, offering reflections on the practical paths of artistic creation in Macao and the future development orientation of art education.

## 人文社科

### 獲批國家教育部人文社會科學重點研究 基地重大項目

大學人文及社會科學學院研究團隊申請的“閩粵非遺項目在東南亞華僑華人社群中的傳承傳播研究”項目，獲 2022 年度國家教育部人文社會科學重點研究基地重大項目立項，充分展示了大學在非物質文化遺產領域的研究水準和學術影響力，以及配合澳門以中華文化為主流，多元文化共存的交流合作基地建設所作出的努力。該項研究將非物質文化遺產的學術理念與民族學、歷史學、人類學、文化學、華僑華人研究等學科相結合，進一步釐清閩粵非遺項目、非遺文化在東南亞華僑華人社群中的傳承、傳播、創造性轉化和創新性發展等相關問題。

## Humanities and Social Sciences

### Major Project of the Key Research Base of Humanities and Social Sciences, Ministry of Education of China

Undertaken by the Faculty of Humanities and Social Sciences of MPU, the “Research on the Inheritance and Dissemination of Fujian-Guangdong Intangible Cultural Heritage among Overseas Chinese Communities in Southeast Asia” was approved as a major project of the Key Research Base of Humanities and Social Sciences, Ministry of Education of China in 2022. This not only demonstrates MPU's high research ability and academic influence in the field of intangible cultural heritage, but also recognises MPU's efforts in supporting the development of Macao as a base for cultural exchange and cooperation with Chinese culture as mainstream and multicultural coexistence. The research project integrates the academic concepts of intangible cultural heritage with disciplines such as ethnology, history, anthropology, cultural studies, and overseas Chinese studies, aiming to further clarify issues related to the inheritance, dissemination, creative transformation and innovative development of Fujian-Guangdong intangible cultural heritage among overseas Chinese communities in Southeast Asia.



獲批國家教育部人文社會科學重點  
研究基地重大項目

Approved as a major project of the National Ministry of Education's Humanities and Social Sciences Key Research Base



## 出版綜合性人文社會科學學術理論刊物

《澳門理工學報》（人文社會科學版）是大學主辦的綜合性人文社會科學學術理論刊物，近年學術影響力持續提升。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》已連續十年穩居全國高校學報前列。目前全國各類高等院校主辦學報約有 1,150 種。與此同時，《澳門理工學報》還先後入選《複印報刊資料重要轉載來源期刊》2014 年版、2017 年版、2020 年版，以及《複印報刊資料重要轉載來源機構（2018 版）》。除複印報刊資料外，近年來《澳門理工學報》發表的多篇文章，也被《新華文摘》、《中國社會科學文摘》及《高等學校文科學術文摘》等二次文獻轉載。

## 中西文化研究

中西文化研究所長期致力於中國傳統文化和澳門歷史的研究和教育推廣工作，近年在抗戰史，文化遺產、口述史等領域，取得豐碩成果。2023 年 7 月，為配合澳門“以中華文化為主流、多元文化共存的交流合作基地”建設，促進澳門文旅產業的發展，深化粵港澳大灣區文化發展，研究所舉辦“傳承出新：非物質文化遺產論壇”。論壇探討非物質文化遺產保護、傳承與發展的理論和實踐問題，以學術研討與非遺傳承人的技藝展演相結合，直觀而生動地展現非遺文化的魅力，彰顯澳門文化的多樣性。

## A Comprehensive Academic Journal of Theories in Humanities and Social Sciences

The *Journal of Macao Polytechnic University* (Humanities and Social Sciences Edition) is a comprehensive academic journal of theories in humanities and social sciences sponsored by MPU, with its academic influence increasing significantly in recent years. According to the rankings of the index of academic articles in the “Replicated Journals” produced by Renmin University of China, the *Journal of Macao Polytechnic University* has been at the forefront of all higher education institution journals in China for ten consecutive years. At present, there are approximately 1,150 journals sponsored by higher education institutions of different types across the country. Furthermore, the *Journal of Macao Polytechnic University* was selected into the 2014, 2017 and 2020 editions of the *Important Source Journals for the Selected Materials*, and the *Important Source Institutions for the Selected Materials* (Version 2018). In addition, many academic papers published by the *Journal of Macao Polytechnic University* were reprinted by *Xinhua Digest*, *Chinese Social Science Digest* and *China University Academic Abstracts*, among others.

## Sino-Western Cultural Studies

The Centre of Sino-Western Cultural Studies has long been committed to the research and education promotion of traditional Chinese culture and Macao history. In recent years, the Centre has accomplished fruitful and satisfactory results in the history of the War of Resistance against Japanese Aggression, cultural heritage, oral history, and other fields. In July 2023, the Centre held the “Inheritance and Innovation: Forum on Intangible Cultural Heritage” in a bid to support the development of Macao as a base for cultural exchange and cooperation with Chinese culture as mainstream and multicultural coexistence. The Forum also promoted the development of Macao’s cultural tourism industry, and further facilitated cultural development in the Guangdong-Hong Kong-Macao Greater Bay Area. At the Forum, participants explored theoretical and practical issues related to the protection, inheritance and rejuvenation of intangible cultural heritage. The Forum combined academic presentations with intangible cultural heritage demonstrations performed by inheritors, vividly showcasing the charm of intangible cultural heritage and highlighting the diversity of Macao’s culture.

## 社會經濟與公共政策研究

社會經濟與公共政策研究所於 2022 年 11 月舉辦“齊心合力，穩中求進—澳門特區政府 2023 年財政年度施政報告”學術座談會。2023 年 3 月，舉辦“《橫琴粵澳深度合作區發展促進條例》學術座談會”，強調深合區服務澳門經濟民生的宗旨和使命，為深合區的發展和推進澳琴一體化提供了堅實的法律保障。同年 4 月，舉辦“關於提升高校專業化智庫建設水平的幾點思考”的學術講座，對智庫的功能、類型、模式、困境等方面進行了精闢分析，對澳門高校智庫建設乃至澳門特區的智庫建設具良好啟發意義。

## “一國兩制”研究

“一國兩制”研究中心主要以“一國兩制”理論實踐為觀察和研究對象，開展各項學術及出版活動。2023 年 1 月至 5 月期間，為慶祝《中華人民共和國澳門特別行政區基本法》頒佈三十週年，中心開展了“澳門基本法頒佈 30 周年—憲法與基本法走進校園”系列活動，選取“一國兩制”實踐過程中“國家安全”及“中央與特區關係”兩個熱點議題作為校園宣講主題。同年 3 月，中心與人文及社會科學學院於承辦“粵港澳大灣區公共管理論壇”，推動大灣區公共管理領域學術交流與合作，打造區域性學術交流平台。本學年，中心續出版《“一國兩制”研究》學術期刊。

## Research in Social, Economic and Public Policies

In November 2022, the Social, Economic and Public Policy Research Centre of MPU held an academic seminar on “Macao SAR Government's Policy Address for the Fiscal Year 2023 – Making Progress Jointly while Ensuring Stability”. In March 2023, the Centre organised an academic seminar on “The Regulations for Promoting the Development of Guangdong-Macao In-Depth Cooperation Zone in Hengqin”. It emphasised the mission of the Cooperation Zone to serve Macao's economy and people's well-being, and provided solid legal guarantees for the development of the Cooperation Zone and the Macao-Hengqin integration. In April 2023, the Centre held an academic seminar on “A Few Thoughts on Enhancing the Level of Professional Think Tank Construction in Universities”, which offered insightful analysis on the functions, types, models and predicament of think tanks, as well as valuable inspiration for the building of think tanks in Macao higher education institutions and in the Macao SAR as a whole.

## Research in “One Country, Two Systems”

The “One Country Two Systems” Research Centre of MPU mainly observes and studies the implementation of the “One Country, Two Systems” theory, and carries out various related academic and publishing activities. From January to May 2023, the Centre organised a series of activities entitled “The 30<sup>th</sup> Anniversary of the Promulgation of the Basic Law of Macao SAR – Constitution and Basic Law on Campuses” to celebrate the 30<sup>th</sup> anniversary of the promulgation of the *Basic Law of the Macao Special Administrative Region of the People's Republic of China*. It selected two hot topics of the practice of “One Country, Two Systems”, namely “national security” and “relations between the central government and the Macao SAR”, as the themes for campus lectures. In March 2023, the Centre and the Faculty of Humanities and Social Sciences jointly held the “Guangdong-Hong Kong-Macao Greater Bay Area Public Management Forum”, promoting academic exchanges and cooperation in the field of public administration in the Greater Bay Area and building a regional platform for academic exchanges. In this academic year, the Centre continued publishing the *Journal of “One Country, Two Systems” Studies*.

## 學術成果

### 學術論文

隨著積極推動科研及教研人員的不懈努力，大學的科研成果產出不斷提升。本學年，大學人員發表的學術期刊論文、會議論文及書章被 SCIE、SSCI、AHCI、EI、Scopus 等引文索引收錄共 685 篇，部分更發表於 *Briefings in Bioinformatics*、*Journal of Medicinal Chemistry*、*IEEE Transactions on Circuits and Systems for Video Technology*、*Mathematics*、*Angewandte Chemie - International Edition*、*Pest Management Science*、*Appetite*、*Expert Systems with Applications*、*Journal of Infection*、*Nucleic Acids Research*、*Sustainable Cities and Society*、*Computers and Electronics in Agriculture*、*IEEE Internet of Things Journal*、*IEEE/ACM Transactions on Audio, Speech, and Language Processing*、*Journal of Medical Internet Research*、*IEEE Journal of Biomedical and Health Informatics*、*Cell Reports Medicine*、*Cities, Education and Information Technologies*、*Resources Policy*、*Finance Research Letters* 等在學科內影響力因子排名前列 10% 的期刊。

獲國際知名引文數據庫 Scopus 收錄的學術文章 427 篇，研究範圍涉及計算機科學、人工智能、應用物理學、工程學、環境科學、生物化學、遺傳學及分子生物學、細胞生物學、化學工程、化學、農業與生物科學、能源學、物理及天文學、地球和行星科學、材料科學、神經科學、藥理、毒理和藥劑學、藥物學、衛生專業、護理學、決策科學、數學、商業、管理和會計、經濟學、計量經濟學及金融學、藝術及人文、社會科學、教育與教育研究、心理學、政治學、公共行政等。

中文核心期刊的論文 16 篇，分別發表於《現代臨床護理》、《藥學學報》、《北京郵電大學學報》、《情報理論與實踐》、《中國行政管理》、《裝飾》、《護理研究》、《中國食品衛生雜誌》、《中國運動醫學雜誌》、《華南師範大學學報 (社會科學版)》、《學術研究》、《護理管理雜誌》等刊物上。

## Academic Outputs

### Academic Articles

With MPU's continuous support for scientific research and its faculty members' unremitting efforts, the scientific research outputs of MPU have been constantly increasing. In this academic year, a total of 685 academic journal articles, conference papers and book chapters published by MPU faculty members were included in citation indexing databases such as SCIE, SSCI, AHCI, EI and Scopus. Journals in which articles were published include: *Briefings in Bioinformatics*, *Journal of Medicinal Chemistry*, *IEEE Transactions on Circuits and Systems for Video Technology*, *Mathematics*, *Angewandte Chemie - International Edition*, *Pest Management Science*, *Appetite*, *Expert Systems with Applications*, *Journal of Infection*, *Nucleic Acids Research*, *Sustainable Cities and Society*, *Computers and Electronics in Agriculture*, *IEEE Internet of Things Journal*, *IEEE/ACM Transactions on Audio, Speech, and Language Processing*, *Journal of Medical Internet Research*, *IEEE Journal of Biomedical and Health Informatics*, *Cell Reports Medicine*, *Cities, Education and Information Technologies*, *Resources Policy*, *Finance Research Letters*, as well as other journals in the top 10% ranked by impact factor as seen from a disciplinary perspective.

A total of 427 academic articles were indexed by Scopus, an internationally renowned indexing database, covering research areas including, but not limited to, computer science, artificial intelligence, applied physics, engineering, environmental sciences, biochemistry, genetics and molecular biology, cell biology, chemical engineering, chemistry, agricultural and biological sciences, energy science, physics and astronomy, earth and planetary sciences, materials science, neuroscience, pharmacology, toxicology and pharmaceuticals, pharmacology, health sciences, nursing, decision science, mathematics, commerce, management and accounting, economics, econometrics and finance, arts and humanities, social sciences, education and educational research, psychology, political science, public administration.

A total of 16 articles were published in core Chinese journals, including: *Modern Clinical Nursing*; *Acta Pharmaceutica Sinica B (APSB)*; *Journal of Beijing University of Posts and Telecommunications*; *Information Studies: Theory & Applications*; *Chinese Public Administration*; *ZHUANGSHI*; *Chinese Nursing Research*; *Chinese Journal of Food Hygiene*; *Chinese Journal of Sports Medicine*; *Journal of South China Normal University (Social Science Edition)*; *Academic Research*; and *Journal of Nursing Administration*.

## 出版物

本學年出版的學術著作 15 項，範疇涵蓋語言學、翻譯、藝術、設計、政策、高等教育等研究。

大學定期出版學術刊物《澳門理工學報》（人文社會科學版）、《“一國兩制”研究》、《葡萄牙語的東方之路》和《世界博彩與旅遊研究》，教研人員著作由海內外著名出版機構出版。

## 科研投放

本學年大學立項的科研項目共 44 項，涵蓋人工智能與醫學診斷、電腦輔助藥物設計、自動語音識別、圖像處理、視頻編碼、無線通信、人工智能、深度學習、物聯網、機器學習、通信感知一體化、網路安全、圖像偽造檢測、資訊科技、數據挖掘、智慧科技與護理模擬教學、運動生理、運動科技、護理、健康科學、博彩旅遊、粵港澳大灣區社會融合、航空運輸、教育、科技藝術創新、語言學、文學翻譯、英語教學、話語分析、口譯與筆譯研究、文化研究、歷史、中西文化交流、自然災害、物理學等研究領域。

## 外界資助 / 委託研究項目

作為一所服務澳門社會的應用型大學，大學每年均獲特區政府部門或其他外界機構委託、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外界機構委託的研究項目及科學技術發展基金資助研究項目共 15 項，涵蓋人工智能、乳癌治療優化、電腦輔助藥物設計、網路通信、資訊科技、博彩旅遊、非物質文化遺產、高等教育、體育文化、護理教學、消費評估、社工專業資格認可等研究領域。

## Books and Other Publications

In this academic year, MPU published 15 academic monographs, covering research areas such as linguistics, translation, arts, design, policies and higher education.

MPU publishes academic journals periodically which include the *Journal of Macao Polytechnic University* (Humanities and Social Sciences Edition); the *Journal of "One Country, Two Systems" Studies*; *Orientes do Português*; and *Global Gaming & Tourism Research*. Works of MPU faculty members are published by prestigious domestic and overseas publishing agencies.

## Research Input

In this academic year, 44 established scientific research projects of MPU covered research areas such as artificial intelligence and medical diagnosis, computer-aided drug design, automatic speech recognition, image processing, video coding, wireless communication, artificial intelligence, deep learning, Internet of Things, machine learning, communication-perception integration, cybersecurity, image forgery detection, information technology, data mining, smart technology and simulated nursing education, sports physiology, sports technology, nursing, health science, gaming and tourism, social integration in the Guangdong-Hong Kong-Macao Greater Bay Area, aviation transportation, education, technology art and innovation, linguistics, literary translation, English teaching, discourse analysis, interpretation and translation studies, cultural studies, history, Sino-Western cultural exchanges, natural disasters, and physics.

## External Funding / Commissions

As an application-oriented university serving the community of Macao, MPU is commissioned, funded or supported with open tenders by government departments or other external organisations each year to conduct research. In this academic year, a total of 15 research projects were commissioned by government departments, external organisations and the Science and Technology Development Fund (FDCT). These research projects covered artificial intelligence, breast cancer treatment optimisation, computer-aided drug design, network communication, information technology, gaming and tourism, intangible cultural heritage, higher education, sports culture, nursing education, consumption evaluation, accreditation for professional qualification of social workers, and other research areas.