

國立中山大學 | 年報

# ANNUAL REPORT

National Sun Yat-sen University

2017-18

NSYSU





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# NSYSU



# 校長的話

## From the President

21 世紀人類生存互動的時空樣貌劇變，無論是全球化或逆全球化，世界各國莫不奮力爭取國際舞台一席之地。由於台灣的特殊定位與國際處境，高等教育於展現國家競爭力之際扮演重要角色，適當調整高教的架構與內涵，實為因應時代潮流與環境變遷的當務之急。

只是，無論時間的演變與教育理論的開展如何，現今在大學裡常見的教學樣貌可能仍是如此：講述式、單向的訊息傳遞，學生在大部分課堂上被動地吸收知識，或受畢業學分、修業時間等限制。面對瞬息萬變的未來，以目前的大學結構，我們能夠培育出具創新思維、能活用專業知識的人才嗎？當時代與環境已快速變遷，傳統舊有的大學結構與課程組織能不進行改革嗎？

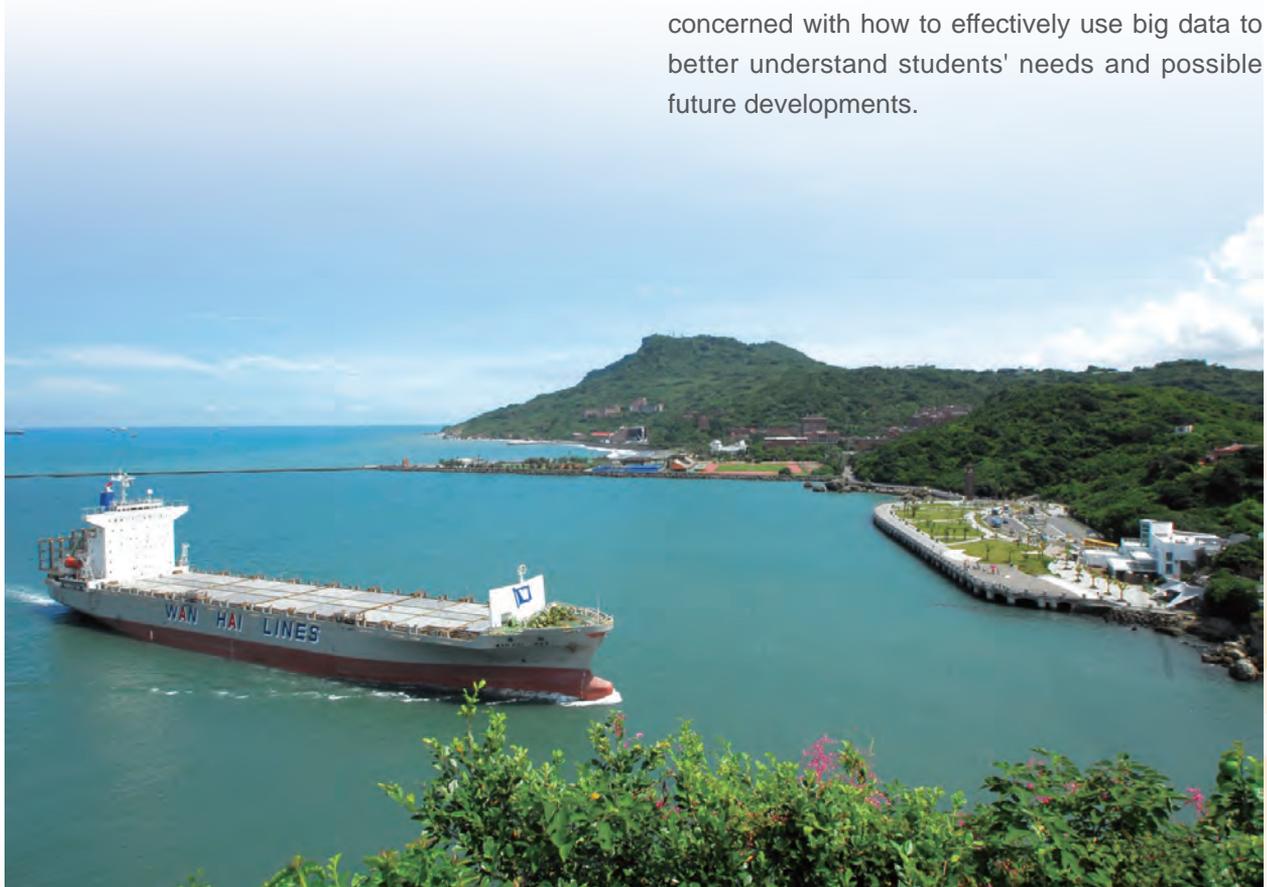


In the 21st century, the time and space of human existence and the means of human interaction have transformed drastically. Every country is struggling to secure a place on the international stage through movements such as globalization and deglobalization. Because of Taiwan's peculiar international status, higher education plays a crucial role in demonstrating national competitiveness. Making appropriate adjustments to the organizational structure and essence of higher education is urgent for responding to current trends and environmental changes.

However, despite the passing of time and the development of educational theory, university pedagogical methods are still primarily didactic teaching, or a one-way message transmission, whereby students passively absorb knowledge or are restricted by the credit system and the time limit on academic progression. Confronted with an ever-changing future, can we truly cultivate talented minds with innovative thinking and the ability to utilize professional knowledge with the current university structure? Furthermore, in a time when society and the environment are facing rapid changes, how can the traditional university structure and curriculum organization not be reformed?

急遽的科技發展改變了人類的生活，世界經濟論壇預估 2020 年人類最關鍵的十大競爭能力，包括解決複雜問題的能力、批判思考能力、創新能力及人際管理能力等，大學該如何培養學生的核心能力，使其能夠駕馭可能還未出現的「未來工作」？工業 4.0 時代，除了延續知識經濟時期的核心價值，更強調以顧客為本位、整合大數據、科技，發展而成的「客製化的商業模式」。此種價值反應在教育上呈現四大特色：創新、以學生為中心的教育理念、提供適合學生「個人化的學習模式」及整合科技的校務治理。身為一位大學校長，我更關注的是，如何有效運用大數據，藉以更瞭解學生需求與未來可能的發展？

Rapid technological developments have transformed and will continue to transform the way we live and work. The World Economic Forum predicted that the top 10 skills in "The Future of Jobs" in 2020 will include critical thinking skills, creativity, interpersonal management skills, and the ability to solve complex problems. How should universities cultivate such core competencies and prepare students for "future jobs" that are perhaps still yet to be invented? In the era of Industry 4.0, in addition to progressing the core values of the knowledge-based economy, the emphasis is placed on a customer-oriented "customizable business model" which integrates big data and technology. This value is reflected in four major characteristics in the field of education: innovation and creativity, student-centered education, the ability to provide students with an individualized learning model, and institutional governance based on integrated technologies. As the president of this university, I am more concerned with how to effectively use big data to better understand students' needs and possible future developments.



面對未來大學的轉變，我想提供以下觀點。首先，網路課程模組的開發與學習逐漸成為主要學習方式之一，具 AI 特性與功能的整合教學、學生輔導的校務治理系統需被建構；且校務系統應與區域產業特性結合，做為育才、課程設計、教學的依據。例如本校結合台灣南部區域發展的南方樞紐產業，著重在離岸風力發電、軌道車的製造與技術研發，以及 PM2.5 防治和永續環境的發展。

再者，科技始終來自於人性，不應被市場導向過度控制。包括人文素養、生命的價值與意義，及生活品味等美學教育，均需納入大學校務治理內容。此外，大學修業年限規範應逐漸鬆綁、入學管道朝向多元，終能使大學成為終身學習與產業技術學習隨時可進出的平臺。

大學也需將其亮麗的研究成果轉化，成為協助區域產業、人力升級的動能，這是一種大學的社會責任。目前中山大學每年有 4% 至 5% 的學生來自於偏鄉、新移民子女與原住民，落實了台灣高教公共化的理念，兼顧市場需求與社會公平正義。

I would like to share my perspective on transforming universities to face our future challenges. First of all, with the development of online course modules, online learning has gradually become one of the students' main learning methods. Therefore, a university governance system with AI characteristics and functions should be devised to integrate instruction and student's individualized, customizable needs. Furthermore, the system should integrate regional industrial characteristics, serving as a basis for talent cultivation, curricula design, and pedagogical activities. For example, NSYSU combines the hub industry developed in Southern Taiwan, which focuses on offshore wind power generation, manufacture and technical research of rail transportation, identification and resolution of PM2.5-related issues, and development of a sustainable environment.

Moreover, as the famous slogan goes, "human technology"; technology originates from people and should not be over-controlled by market orientation. Aesthetic education, including humanities, as well as the value, meaning, and pleasures of life must be part of the university governance. Furthermore, the time limits on students' study should gradually be loosened. The methods of enrollment should become increasingly diversified. Ultimately, the university will become a platform for lifelong learning and for students who need to learn industry skills and technology to access or leave at any given time.

The university must also transform and transfer its brilliant research performance into the backbone to support regional industries and the upgrade human resources. This is a form of the university's social responsibility. Currently, between 4% and 5% of the students at National Sun Yat-Sen University (NSYSU) come from rural areas or are children of new immigrants or indigenous people, which publicizes Taiwan's higher education system and considers market demand as well as social equality and justice.

最後，我想以一張常用來與行政團隊勉勵的圖像作為結尾。這是一張 2012 年溫哥華水族館的宣傳海報，標題為「Imagine yourself in our world」，地球有 70% 的面積是水，您可以想像，若有一天我們生活在海中，那會是什麼樣子？需要什麼樣的科技輔助、我們教育內容會有什麼樣的變化？無論是科學、人文、歷史、藝術等，都將與現在截然不同。大學，要能培養出能夠開創未來的人；大學，是一種兼具專業知識、技能與創新思維的人才培育系統。在大學殿堂中，讓我們一同「想像未來，勇於追夢」！

*Imagine yourself in our future world !*

鄭英耀



Finally, I want to conclude with an image that I often use to encourage the administrative teams. This is a poster used to promote the Vancouver Aquarium in 2012, titled "Imagine yourself in our world". A total of 70% of the earth is covered by water. Can you imagine that, if one day we were to live in the sea, what it would look like? What kind of technology would be required? What changes would be made to our educational content? Whether we are discussing science, humanities, history, or art, it would be completely different from what it is now. The university must be able to cultivate great minds capable of creating a bright future; the university is a talent-cultivation system that combines professional knowledge, skills, and innovative thinking. The university is the perfect place to imagine the future and to dare to chase dreams!

*Imagine yourself in future world !*

Ying-yao cheng



# NSYSU



# 中山概覽

## University Overview

## 校訓 University Motto

博學 審問 慎思 明辨 篤行

Erudite, Interrogated, Deliberate, Discerning, and Persistent

## 願景 Vision

擔當大高雄之學術、文化、人才培育及產業發展之發動機

To serve as the engine for Greater Kaohsiung's academic advancement, cultural, prosperity, talent cultivation, and industrial development

## 目標 Goals

培育具前瞻思維領導菁英 促進社會階級流動

Cultivating leaders with vision and promoting social mobility

創造卓越學術價值 提升國際學術競爭力

Advancing academic excellence and international competence

引領區域升級發展動能 創建社會與經濟福祉

Spurring regional upgrade and development for social and economic welfare

本校位於高雄市西子灣畔，倚坐壽山，前瞻高雄港，以「海洋」教育與研究為發展特色，建校三十餘年來，已成為一所人文與科技並重的精緻研究型大學，同時躋身全國重點研究型大學行列。

本校國際學術成果表現亮麗，充分具備人才培育與學術研究的能量與競爭優勢，已成為國際知名一流大學。2016 至 2018 連續三年入列全球年輕大學前 50 名。根據 2018 年 QS (Quacquarelli Symonds) 全球大學學科排名，本校有 14 個學科領域入榜，其中英語文、教育及電機工程更排名世界前 100-150 名。

國立中山大學以「讓生命在中山轉彎」為宗旨，堅守人本關懷的教育價值，期許培養能貢獻所學、造福人群，具全球競爭力的人才。本校致力提升國際化教學環境，外籍教師人數占全校師資近 10%，國際化程度高居全國前 10 名。國內《Cheers》「2018 企業最愛大學生」及《遠見》「2018 台灣最佳大學」兩項大學調查，中山大學均名列全國前十大最佳大學。

秉持著大學社會責任的信念及「在地連結 全球視野」的精神，中山大學不斷面對挑戰與躍升，成為莘莘學子嚮往，優秀人才聚集，校友引以為傲的一流學府，繼續在台灣締造更多輝煌成就。

Founded in 1980 at Sizihwan Bay, the National Sun Yat-sen University is renowned for the development of marine education and research. In the past 3 decades, the institution has become a robust research university that emphasizes the humanities and technology and is a key research universities of Taiwan.

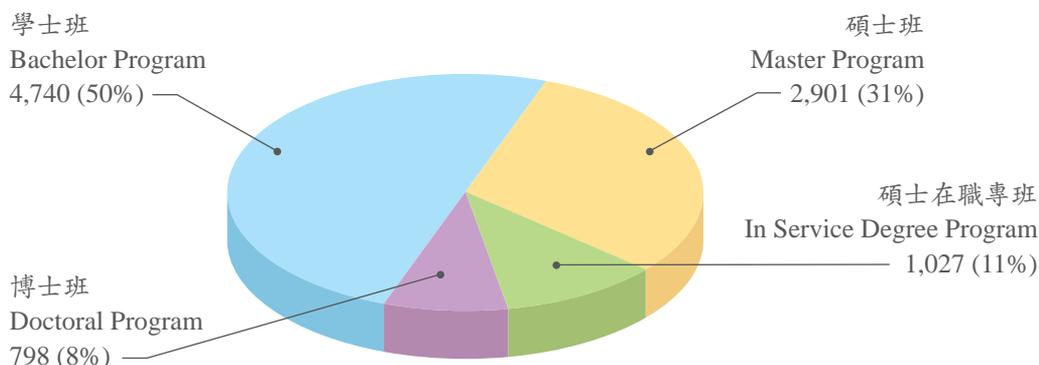
In recent years, the university's impressive academic performance has make the school an internationally renowned, first-class university. For three consecutive years 2016 to 2018, NSYSU is listed among the top 50 best emerging universities globally. The university was ranked for 14 disciplines in the 2018 Quacquarelli Symonds world subject rankings, with English Language and Literature, Education and Electrical & Electronic Engineering ranked among the top 100-150 in the world.

Our purpose is to provide opportunities for students to discover their potentials by holding fast to teaching humanistic values, pursuing academic excellence and promoting social mobility. We are striving to upgrade the international teaching environment with the number of foreign faculty members accounts for nearly 10% of the total faculty members. The internationalization of the university ranks among the top 10 in the country. NSYSU aspires to develop globally competitive talents who will contribute professionalism to society. In 2018 NSYSU is ranked nationally among top 10 in both domestic university rankings.

We continue to fulfill our responsibility to society based on building local links with a world vision. In the face of constant challenges and improvements, NSYSU has become a top-notch university where students are yearning for, talented people gather, and alumni are proud of. We will endeavor to undertake our task and continue to create more brilliant achievements in Taiwan.

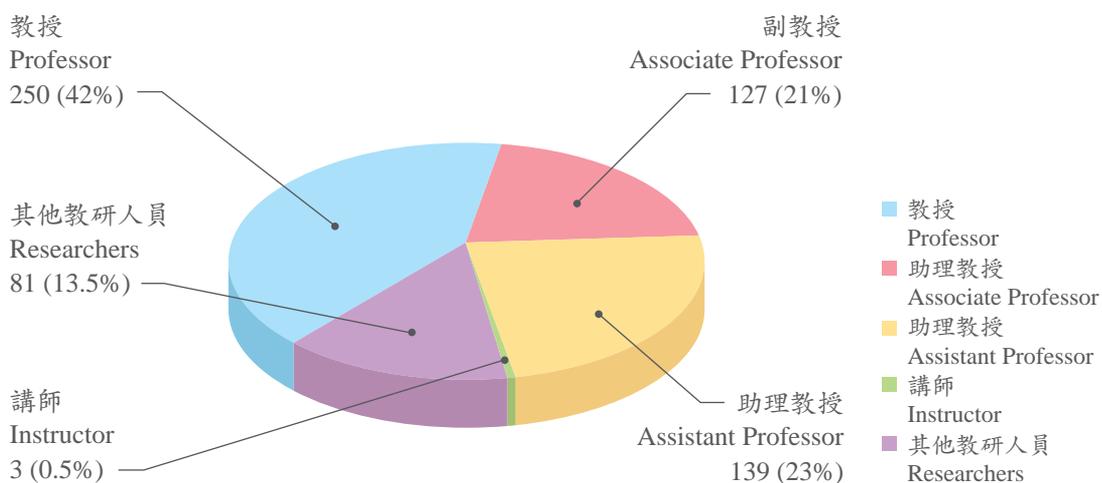
106 學年度全校學生人數為 9,466 人

The total number of students is 9,466 for academic year 2017-2018.



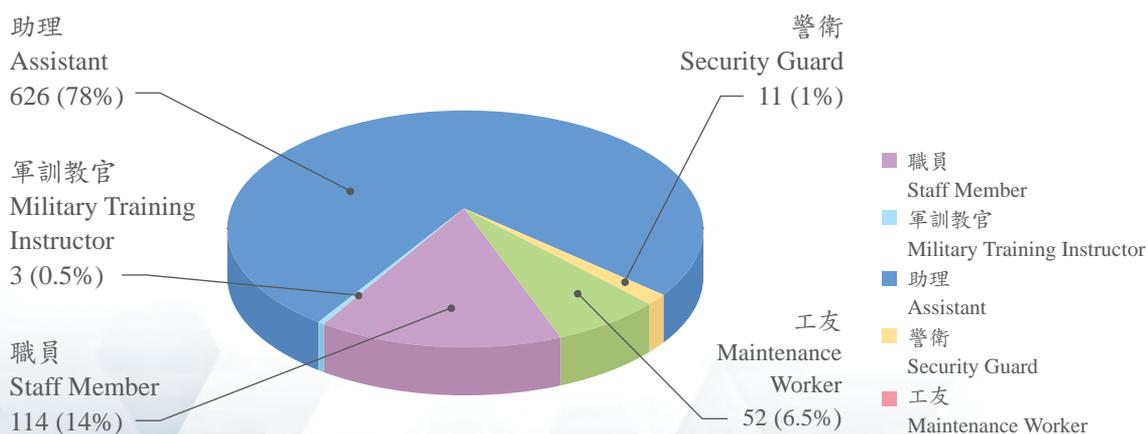
107 學年度專任教研人員人數為 600 人

The total number of full-time faculty members is 600 for academic year 2017-2018.



107 學年度行政人員人數為 806 人

The total number of full-time staff is 806 for academic year 2017-2018.



註：統計日期為 2018 年 10 月 17 日  
Remarks: Figures as at October 17, 2018

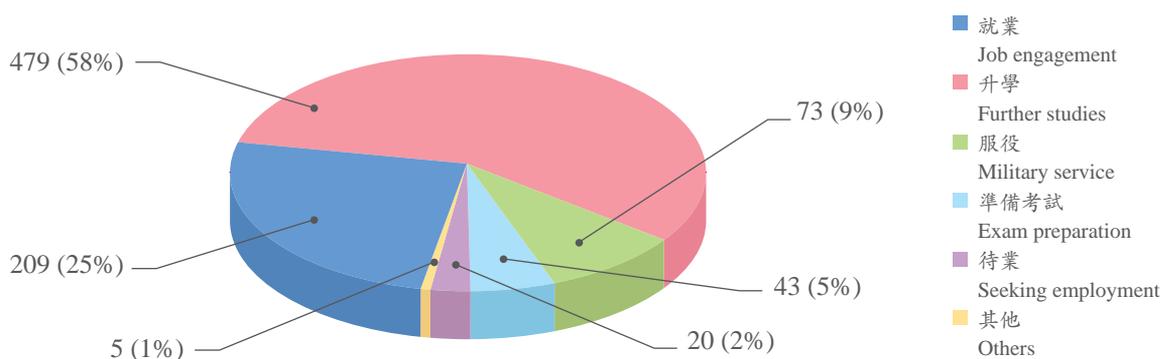
統計至 106 學年度，畢業生總人數為 58,294 人

The cumulative number of graduates is 58,294 as of October 17, 2018.

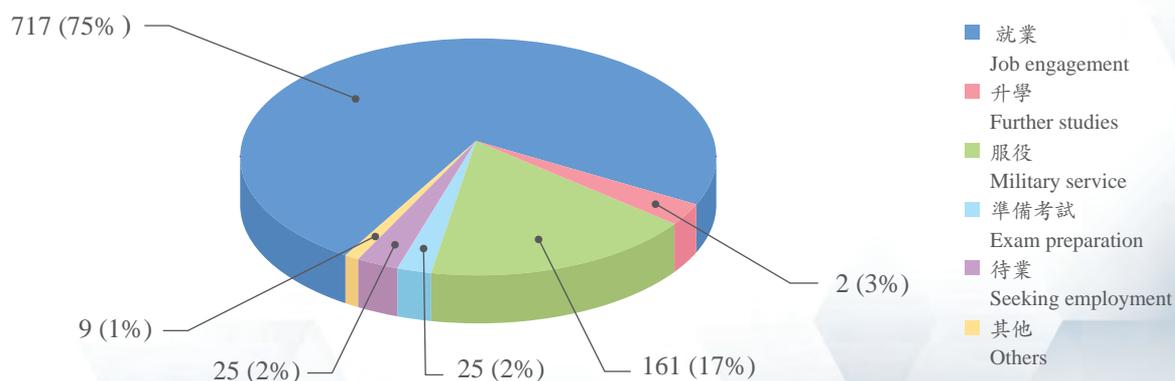
畢業生畢業學年度分布 Number of graduates by academic years	
70-79 學年度 (1981-1990 AY)	3,246
80-89 學年度 (1991-2000 AY)	13,257
90-99 學年度 (2001-2010 AY)	24,561
100-105 學年度 (2011-2016 AY)	14,722
106 學年度 * (2017-2018 AY*)	2,508
<b>總人數 Total</b>	<b>58,294</b>

### 104 學年度畢業生畢業後一年流向調查

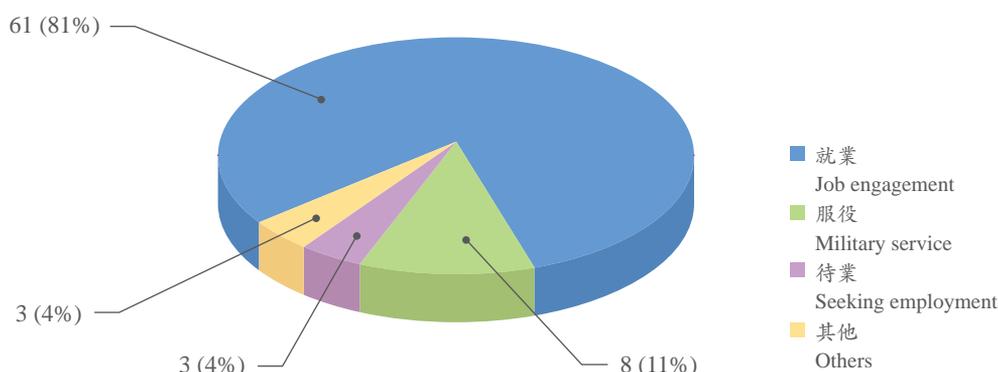
Employment Survey - one year after graduation (Statistics for 2015 - 2016 academic year graduates)



\* 學士班畢業人數 1,041，完成調查人數 829，回覆率 79.6%  
\* No. of graduates 1,041, no. of respondents 829, response rate 79.6%



\* 碩士班畢業人數 1,283，完成調查人數 960，回覆率 74.8%  
\* No. of graduates 1,283, no. of respondents 960, response rate 74.8%



\* 博士班畢業人數 118，完成調查人數 75，回覆率 63.6%  
\* No. of graduates 118, no. of respondents 75, response rate 63.6%

### 106 年度支出分析 Expenditure analysis as of 2017

單位：元 Unit: NT Dollar

項目 Item	金額 Amount	百分比 Percentage
教學研究及訓輔成本 Teaching and research expenses	1,718,669,073	49.22%
建教合作成本 Cooperative education expenses	1,100,750,546	31.53%
推廣教育成本 continuing education expenses	54,926,358	1.57%
學生公費及獎勵金 Students scholarship and fellowship expenses	205,507,748	5.89%
管理及總務費用 General and administrative expenses	271,813,581	7.78%
雜項業務費用 Misc. operating expenses	15,334,595	0.44%
財產交易短絀 Loss from property transactions	50,041	0.01%
雜項費用 Misc. expenses	124,452,389	3.56%
<b>合計 Total</b>	<b>3,491,504,331</b>	<b>100.00%</b>

備註：

1. 雜項業務費用為招生考試費用。
2. 雜項費用主要為各場館費用。

Remarks:

1. Misc. operating expenses indicate admission examination operating costs.
2. Misc. expenses indicate venue costs.

106 年度收入分析  
Income analysis as of 2017

單位：元 Unit: NT Dollar

項目 Item	金額 Amount	百分比 Percentage
政府補助 Government funding		
教育部補助—基本需求 Education funding from Ministry of Education	1,063,198,000	29.97%
競爭型收入 Competitive funding	421,591,861	11.88%
自籌收入 Self-generated income		
學雜費收入 Tuition and fees	537,649,008	15.16%
產學合作收入 Academia-industry cooperation	254,144,246	7.16%
政府科研補助及委辦收入 Government subsidies for scientific research or from government commissions	940,988,862	26.53%
資產使用及權利金收入 Facility management and entitlement premium	146,031,342	4.12%
推廣教育收入 Continuing education	59,499,998	1.67%
受贈收入 Donation income	53,108,334	1.50%
財務收入 Financial revenues	40,445,727	1.14%
其他收入 Other income	30,809,805	0.87%
<b>合計 Total</b>	<b>3,547,467,183</b>	<b>100.00%</b>

備註：

1. 學雜費收入已扣除減免數 21,398,855 元。
2. 雜項業務收入為招生考試收入。
3. 資產使用及權利金收入為宿舍、停車場等活動場所收入。

Remarks:

1. Tuition and fees income has exempted tuition waivers of \$21,330,379.
2. Miscellaneous operating expenses indicate admission examination operating costs.
3. Facility management and entitlement premium include dormitory fees, parking and other venue fees.

### 院系所總覽

學院	系 所	學士班	碩士班	博士班	碩士 在職專班
文學院	中國文學系	●	●	●	
	外國語文學系	●	●	●	
	文學院音樂學系	●	●		
	劇場藝術學系	●	●		
	哲學研究所		●		
理學院	化學系	●	●	●	
	物理學系	●	●	●	
	生物科學系	●	●	●	●
	應用數學系	●	●	●	
	生物醫學研究所		●	●	
	醫學科技研究所		●		
	理學國際博士學位學程			●	
工學院	電機工程學系	●	●	●	
	機械與機電工程學系	●	●	●	
	資訊工程學系	●	●	●	
	材料與光電科學學系	●	●	●	
	光電工程學系	●	●	●	
	環境工程研究所		●	●	●
	通訊工程研究所		●	●	
	電機電力工程國際碩士學程		● *		
	電信工程國際碩士學位學程		● *		
管理學院	企業管理學系	●	●	●	
	資訊管理學系	●	●	●	●
	財務管理學系	●	●	●	●
	公共事務管理研究所		●	●	●
	人力資源管理研究所		●	●	●
	行銷傳播管理研究所		●		●
	國際經營管理碩士學程		●		
	人力資源管理全英語碩士學位學程		●		
	高階經營碩士學程在職專班				●
	兩岸高階主管經營管理碩士在職專班				●
	金融創新產業碩士專班		●		
	電子商務與商業分析數位學習碩士在職專班				●

學院	系 所	學士班	碩士班	博士班	碩士 在職專班
海洋 科學學院	海洋生物科技暨資源學系	●	●	●	
	海洋環境及工程學系	●	●	●	
	海洋科學系	●	●	●	
	海下科技研究所		●		
	海洋事務研究所		●		
	海洋生物科技博士學位學程			●	
社會 科學院	政治經濟學系	●			
	社會學系	●	●		
	政治學研究所		●	●	●
	經濟學研究所		●	●	●
	中國與亞太區域研究所		●	●	●
	教育研究所		●	●	●
	亞太事務英語碩士學位學程		● *		
	高階公共政策碩士學程在職專班				●
校不分系 學士班	人文暨科技跨領域學士學位學程	●			

\* 僅招收外國學生。

### Program Overview

College	Department/Institute	Under-graduate	Master	Ph.D.	In Service Master
College of Liberal Arts	Department of Chinese Literature	●	●	●	
	Department of Foreign Language and Literature	●	●	●	
	Department of Music	●	●		
	Department of Theater Arts	●	●		
	Institute of Philosophy		●		
College of Science	Department of Chemistry	●	●	●	
	Department of Physics	●	●	●	
	Department of Biological Sciences	●	●	●	●
	Department of Applied Mathematics	●	●	●	
	Institute of Biomedical Sciences		●	●	
	Institute of Medical Science and Technology		●		
	International Ph.D. Program for Science			●	
College of Engineering	Department of Electrical Engineering	●	●	●	
	Department of Mechanical and Electro-Mechanical Engineering	●	●	●	
	Department of Computer Science and Engineering	●	●	●	
	Department of Materials and Optoelectronic Science				
	Department of Photonics	●	●	●	
	Institute of Environmental Engineering		●	●	●
	Institute of Communications Engineering		●	●	
	International Master's Program in Electric Power Engineering		● *		
	International Master's Program in Telecommunication Engineering		● *		
College of Management	Department of Business Management	●	●	●	
	Department of Information Management	●	●	●	●
	Department of Finance	●	●	●	●
	Institute of Public Affairs Management		●	●	●
	Institute of Human Resource Management		●	●	●
	Institute of Marketing Communications		●		●

College	Department/Institute	Under-graduate	Master	Ph.D.	In Service Master
	Master of Business Management Administration Program in International Business		●		
	Global Human Resource Management English MBA Program		●		
	Executive Master in Business Administration				●
	Cross-Strait Executive Master of Business Administration				●
	Industrial Technology Graduate Program in Financial Innovation		●		
	Online Master of Business Administration in Electronic Commerce and Business Analytics				●
College of Marine Sciences	Department of Marine Biotechnology and Resources	●	●	●	
	Department of Marine Environment and Engineering	●	●	●	
	Department of Oceanography	●	●	●	
	Institute of Undersea Technology		●		
	Institute of Marine Affairs		●		
	Doctoral Degree Program in Marine Biotechnology			●	
College of Social Sciences	Department of Political Economy	●			
	Department of Sociology	●	●		
	Institute of Political Science		●	●	●
	Institute of Economics		●	●	●
	Institute of China and Asia- Pacific Studies		●	●	●
	Institute of Education		●	●	●
	International Master Program in Asia-Pacific Affairs		● *		
	Executive Master of Public Policy Program				●
Inter-disciplinary Bachelor's Program	Program in Interdisciplinary Studies	●			

\* Only for international students.



# NSYSU



# 校園建設

## Our Campus

本校積極打造節能及無污染的綠色校園，發展綠色能源科技、推動環境保護不遺餘力，期成為綠色大學示範學校。2017 年共於 7 棟建築物屋頂新建太陽能光電系統，使全校太陽能光電發電量達到每年約 115 萬度。同時進行汰換大型建築物老舊中央空調，搭配監控系統負載管理，改善電資大樓、逸仙館、圖資大樓、體育館、行政大樓空調系統，每年約可減少 83 萬度用電，展現節能效益。宿舍區翠亨宿舍 C、E 棟及 H 棟亦增設或更新老舊熱泵系統，減少約 50% 柴油量；翠亨宿舍 F、H、L、G 棟及武嶺一村、體育館、游泳池各增設太陽能熱水設備，以實際行動節能減碳。

National Sun Yat-Sen University (NSYSU) spared no effort in establishing a green campus that is energy-saving and pollution-free, developing green-energy technology, and promoting environmental protection. It aims to become a model school for green universities. In 2017, solar energy photovoltaic systems were constructed on the roofs of seven buildings, boosting the total amount of solar photovoltaic power generated to approximately 1.15 million kW per year. At the same time, the old central air conditioners of large buildings were replaced with new ones that had a load-management monitoring system, thereby improving the air conditioning systems in the Electric and Computer Engineering Building, Sun Yat-sen Hall, Library and Information Building, Gymnasium, and Administrative Building. The electricity consumption was reduced by approximately 830,000 kWh per year, demonstrating energy efficiency. In the dormitory area, the Tsui-heng Villa buildings C, E, and H also added or updated old heat pump systems to reduce the amount of diesel consumption by approximately 50%.

To the Tsui-heng Villa buildings F, H, L, and G, Wu-ling Village 1, Gymnasium, and swimming pool, a practical action—installing solar water heaters—was conducted to save energy and reduce carbon emissions.





### 校園減碳 邁向綠色能源與電動運輸

本校響應 2017 高雄生態交通全球盛典，提供仿古電動巴士運行，並首創在南台灣校園內設置充電停靠站。此外，另一項綠色運具—校園電動機車也正式上路，2017 年 6 月在宿舍區及教學行政區設置 8 個校園智慧電動二輪車租賃站，88 台電動機車進駐校園，師生只要上網註冊，透過手機雲端租賃，就可在校園輕鬆移動，改善校內交通環境與廢氣減量。

### Carbon Reduction on Campus: Embracing Green Energy and Electric Transportation

NSYSU responded to the message conveyed at the 2017 Kaohsiung EcoMobility World Festival, both conducting a pseudo-classic electric bus trial run and establishing a charging station on the campus in southern Taiwan. Furthermore, another mode of green transportation, the campus electric motorcycle, has now been officially launched. In June 2017, 8 smart electric two-wheeler rental stations were set up on campus in the dormitory and in teaching administrative areas. 88 electric motor vehicles were stationed on the campus. Teachers and students can register online and rent these vehicles with a simple click on their smartphones to move across the campus easily. The use of these vehicles improved the school traffic environment and reduced exhaust gases.

## 零污染 防救災共構共站行動通訊平臺啟用

本校長期發展綠色能源科技，以實際行動引進綠色能源。「防救災共構共站行動通訊平臺基礎設施強化備用電力設備」於2018年2月啟用。該備用電力設備與海科院造波池基地台共構，可在災害發生電力中斷時，連續提供72小時基地台運轉電力，維持對外通訊暢通，大大提升整體防救災的效率。此外，更使用綠能源發電，達到零污染、零碳排的環保效果。

## Zero Pollution: Disaster Prevention and Relief Through a Coconstructed and Costationed Communication Platform

Our school has long been developing green-energy technologies and has introduced green energy through practical actions. A platform capable of providing power in the event of power interruption during a disaster was launched in February 2018. The backup power equipment was co-constructed with the wave-tank base station of the College of Marine Sciences. It can provide power for the base station to operate for 72 consecutive hours in the event of power interruption during a disaster, and thus maintain smooth communication with the external world and greatly improve the overall disaster relief efficiency. In addition, the use of green energy to generate electricity enables NSYSU to achieve the goal of zero pollution and zero carbon emissions, which is an outstanding achievement in terms of environmental protection.





### 六大聯誼會入駐活動中心

位於學生活動中心西棟3樓的空間，經秘書室重新打造後，成為教職員工聯誼會聯合辦公室，牆面上有已故教授余光中題字，「讓春天從高雄出發 望遠景自西灣開始」、「太陽點名中山 西灣英才輩出 柴山耀眼動人」等字裡行間處處可見西灣風情。教師聯誼會、女性教師聯誼會、職工聯誼會、身心障礙教職員工聯誼會、退休人員聯誼會、教師眷屬聯誼會等六大聯誼會正式進駐，讓教職員工在此相聚交流。

### 通過國家級認證 田徑場全新啟用

本校依山傍海，景色秀麗，但也因鹽分侵蝕，二十餘年的田徑場日益老舊，不堪使用。歷經近三個月修繕後，田徑場2018年5月23日正式重新啟用。整修後的田徑場通過中華民國田徑協會場地認證，跑道鋪面材質、設施標線及排水性等皆符合IAAF認證合格，在耐用度與功能性上皆具備相當水準，是「國家標準級」的操場，提供師生更好的教學與運動環境。

### Six Associations are Settled in the Student Activity Center

The space on the third floor of the West Building of the Student Activity Center was redesigned by the Secretarial Office and became the joint office of the Faculty and Staff Association. On the wall are quotations from poems written by the late professor Yu Kwang-chung: "Let the spring sail from Kaohsiung, looking into the distance from the Sizihwan" and "The sun singles out Zhongshan, Sizihwan cultivates numerous talents, and Chai Shan is dazzling in its beauty". The splendid scenery of Sizihwan is clearly reflected in the words. The Teachers Association, Association of Women Teachers, Association of Staff and Workers, Association of Teachers and Faculty Staff with Physical or Mental Disabilities, Retirees' Association, and Association of Teachers' Family Dependents are formally situated in this building, providing faculty and staff with the opportunity to meet and socially interact.

### The New Track and Field Stadium Achieved National Certification

NSYSU, surrounded by mountains and seas, boasts remarkably beautiful scenery. However, due to salt erosion, the old track and field stadium, which was more than 20 years old, had become increasingly unusable. After nearly three months of repairs, it was officially reopened on May 23, 2018. The renewed track and field venue is certified by the Chinese Taipei Athletics Association. The material used to pave the runway, facility markings, and drainage system are all IAAF-approved and of a high standard with regard to durability and functionality. They are a "national standard" sports field, providing teachers and students alike with a more favorable teaching and sports environment.





### 教授名家捐贈畫作 豐富校園美感

為形塑美學生活，讓校園環境充滿美感素養，本校陽光藝術季舉辦「教授名家特展」，集結 11 位當代頂尖畫家、25 幅作品。展後所有作品全數捐贈予中山大學典藏成為校園公共財，部分作品移置圖書館及各學院等校園公共空間續展，延續美學精神。

### Enriching Our Campus Life with Beauty Through Artworks of Professors and Famous Painters

To create a sense of aesthetic beauty for campus life and surrounded environment, NSYSU has organized a special exhibition during the Sunshine Art Season, presenting 11 well-known top painters and 25 art works of them. After the exhibition, all works have been NSYSU property for public display. Some of the works have been relocated in the library, various colleges, and other public spaces on campus to continuing the exhibition and prolonging the aesthetic spirit.

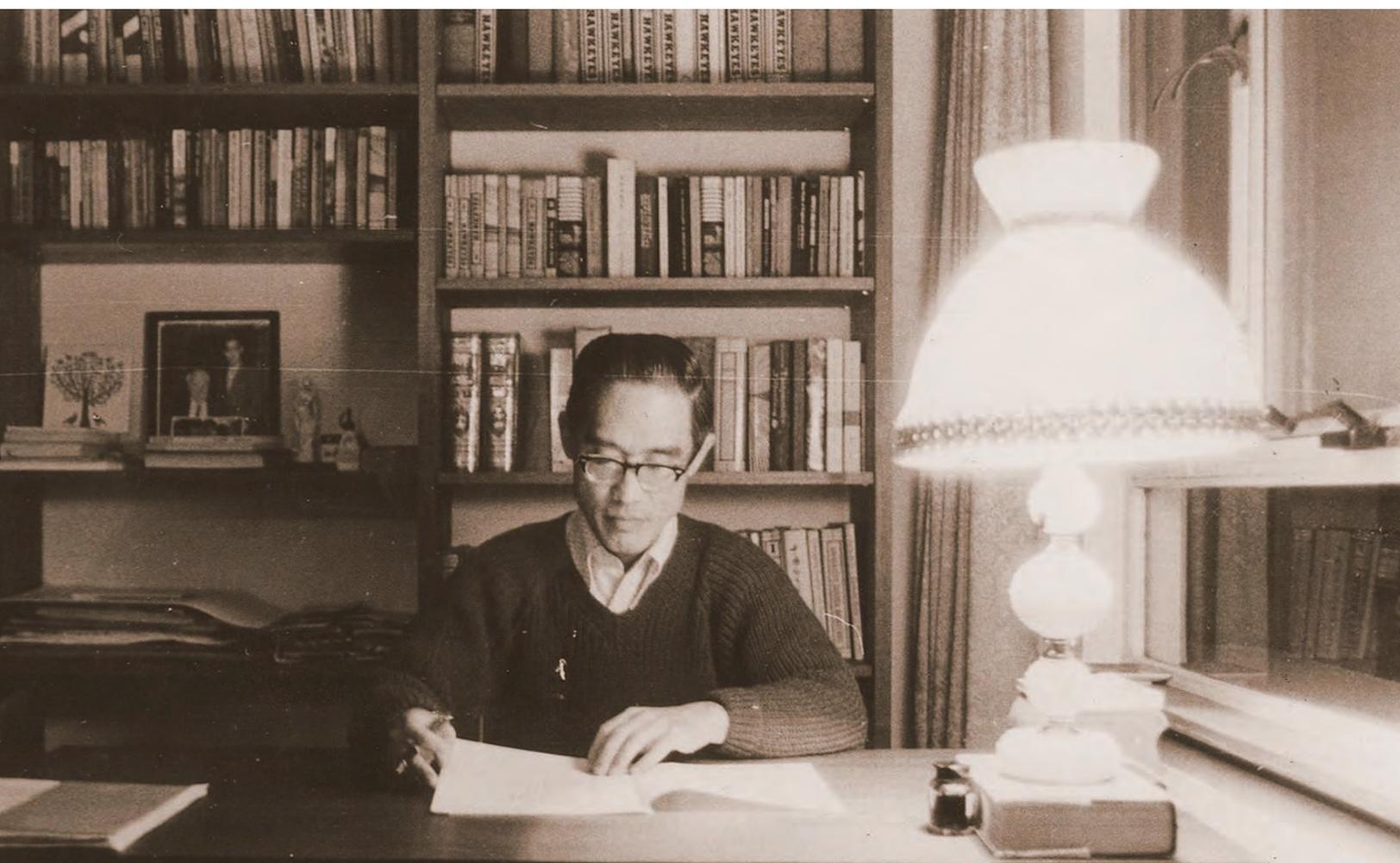


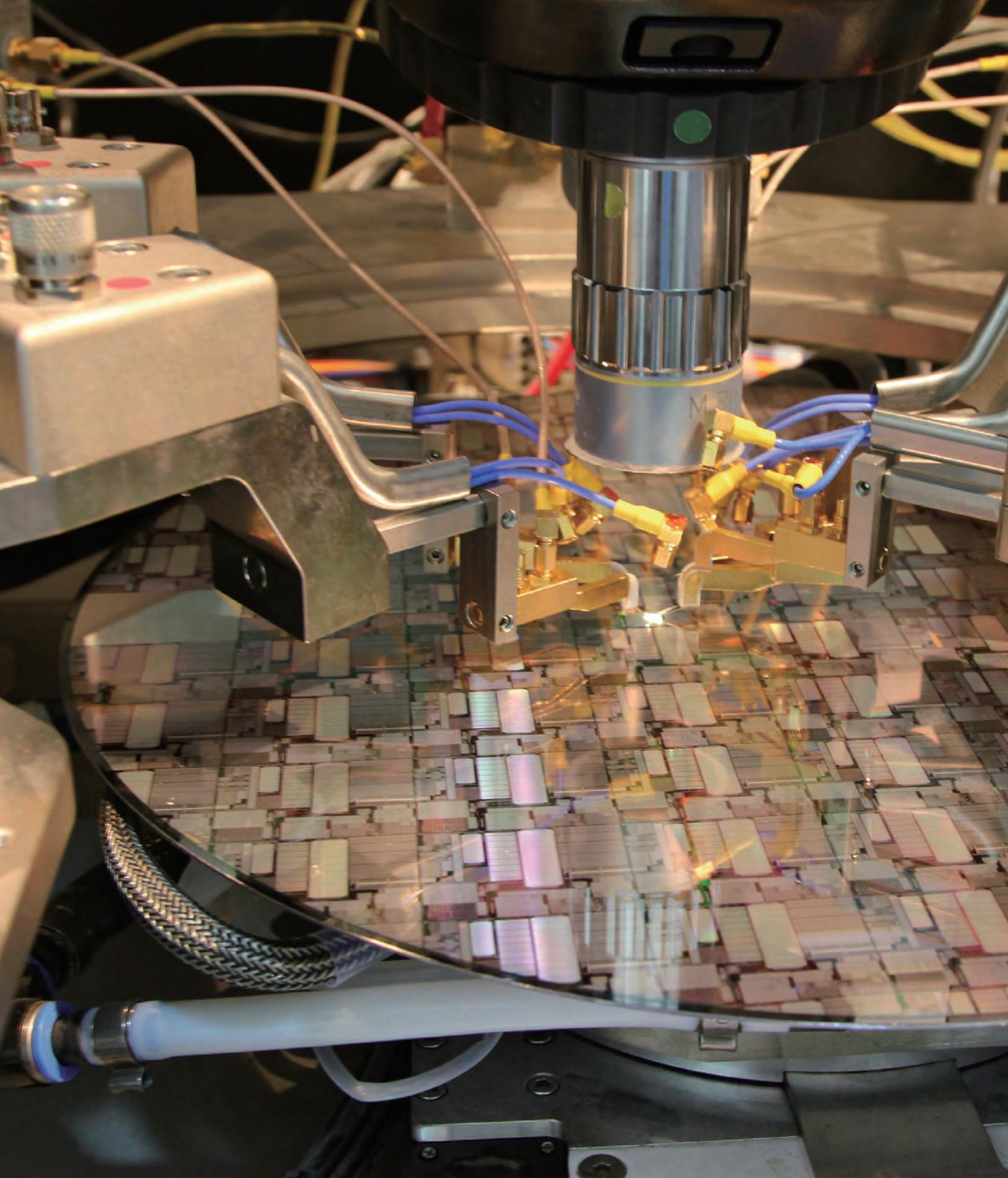
## 余光中書寫香港紀錄片 校園首映

本校歷時數月完成「余光中書寫香港紀錄片」，拍攝團隊實地走訪香江取景，訪談余光中多位文壇舊識，回顧余光中教授文學生涯中長達 11 年的「香港時期」，呈現其文學創作、教學與生活點滴。本校設有「余光中特藏室」，包括余師的出版書籍、珍貴手稿、私藏照片和紀念品等，以及其所崇仰的北宋文學家蘇軾雕像與佛像。

## The Premiere of Yu Kwang-Chung Writing Hong Kong

NSYSU spent several months completing the filming of a documentary on Kwang-Chung Yu. The film crew visited Hong Kong to film the scenes, interviewed many of his old acquaintances from literary circles, reviewed the "Hong Kong period" of the literary career of the late professor Kwang-Chung Yu that lasted for 11 years, and presented his literary creations, teachings, and life. NSYSU has an exhibition room, "Kwang-Chung Yu's Archive", which is home to his published books, precious manuscripts, private photos, mementos, and statues of Buddha and the Northern Song dynasty literary giant Su Shi, whom he greatly admired.





# NSYSU



# 研究亮點

## Research Highlights

本校累積多年的努力，研究合作對象遍布全球，且領域之研究成果已領全球研究趨勢之先，例如 5G 手機多天線系統、高靈敏度雷達系統、晶體生長研究、黑潮發電計畫、東沙國際海洋研究站、水下載人載具等，厚實卓越的研究基礎與實力，長期以來，本校教師在 ESI 資料庫 22 個研究領域中，有 9 個研究領域及全領域 (All Field) 的論文被引用次數進入全球前 1%。我們將持續精進研發質量，成為更具國際競爭力的世界頂尖大學。

本校期許承擔「大高雄之學術、文化、人才培育及產業發展之發動機」之社會責任，因此本校研究主軸都能呼應國家發展方向及政策。未來為配合國防自主以及國家能源轉型等政策，本校聚焦兩項「新興重點研究群」的發展，包括水下載人載具的研究開發，以及氣膠科學 PM2.5 的偵測與防治研究。此外，本學年度設立跨院一級研究中心「社會實踐與發展研究中心」，研究團隊走入緊鄰本校的高雄舊港區（旗津區、哈瑪星、鼓山區、鹽埕區），透過與社區居民及團體協作、發掘在地問題，藉由大學專業知識、常民智慧及在地文化的交織與轉譯，協助擬定解決方案。在力求理論與實務並重的過程中，促進社會正義與提升在地幸福感。

本校多位教師榮獲學術界重量級榮譽，包括通識教育中心林煥祥講座教授榮獲 106 年度科技部傑出特約研究員獎，資管系邱兆民教授、材光系郭紹偉教授奪得科技部傑出研究獎，化學系詹揚翔副教授獲科技部吳大猷先生紀念獎等。此外，環境工程研究所高志明教授獲頒第 24 屆東元獎。

National Sun Yat-sen University (NSYSU) has conducted impressive academic research for the past 38 years, and is now recognized worldwide as an outstanding research university. In order to connect with the global trends of research innovation, NSYSU cooperates and collaborates with many institutes and universities around the world. The research achievements, such as the Multi-Gbps Smartphones of 5G/B5G Communications, Innovations of Real-time Non-contact Potable Radar Monitoring System, Crystal Growth Research, Kuroshio Current Power Generation, Establishment of Dongsha Atoll Research Station (DARS), the development of Taiwan's first Manned Submersible, and others have resulted in the University becoming one of the most highly-ranked universities, both domestically and globally. Of the 22 fields of research in the Essential Science Indicators database, NSYSU has nine research fields with citations ranked in the top 1% in 2018. Based on the foundation of solid resources along with the supporting system, NSYSU will continue to strengthen its academic competitiveness and become a top-ranked university in the world.

NSYSU assumes social responsibility as an academic leader in driving the development of culture, cultivation of talents, and industrial advancement of the Kaohsiung Metropolitan Area. The university places a high priority on faculty and student research that includes cooperation with governmental agencies involved with national defense and energy transition. Most recently, NSYSU focused its research attention on Manned Submersible Research and Aerosol Science Research for the PM2.5. Furthermore, the establishment of the "Social Engagement Center" has contributed to the revitalization of several old communities (Cijin, Hamaxing, Gushan, Yancheng) near the Kaohsiung Port. The researchers invited the local people to join the projects, keeping the historical buildings and the traditional cultures alive with new creative ideas. This resulted in the communities becoming more livable, dynamic, and prosperous, attracting tourists and bringing more confidence and happiness to the local people.

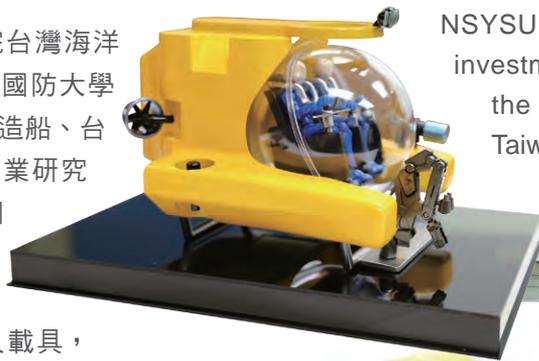
Numerous teachers have received honorable academic awards. Lin Huann-Shyang, Chair Professor at the Center for General Education, received the Merit MOST Research Fellow Award in 2017, and Chiu Chao-Min from the Department of Information Management and Kuo Shiao-Wei from the Department of Materials and Optoelectronic Science received the MOST Academic Research Award. Chan Yang-Hsiang, Associate Professor in the Department of Chemistry, received the MOST



本年度研究亮點包括六大單位聯手打造全國首艘科研水下載人載具、研發全球最大光子晶體、暖化加快海水酸化及中藥材當歸可望防PM2.5病變等，相關研究除獲國際頂尖期刊肯定，亦獲媒體大篇幅報導，展現學術研究於社會之影響力。

### 六大單位結盟 打造全國首艘 科研水下載人載具

本校攜手國研院台灣海洋科技研究中心、國防大學理工學院、中信造船、台船公司、金屬工業研究發展中心，共同宣示投入研發全台第一艘由國人自製的水下載人載具，並協力培育相關產業人才。透過產學研合作，六大單位合力組成「科研水下載人載具開發聯盟」，規劃五年內整合開發科研水下載人載具（潛艇），並積極培育相關人才，預計可加速目前台灣正進行的海洋綠能計畫，包括離岸風力發電、黑潮發電與海洋深層水等，並可支援軍方聯合演訓、軍事探查及水下救援。



Ta-You Wu Memorial Award, and Professor Jimmy Chih-Ming Kao from the Institute of Environmental Engineering received the 24th TECO Award.

The research highlights of the past academic year are distinguished. The industry-academia collaboration with five domestic institutes for the development of Taiwan's first manned submersible, the development of the world's largest photonic crystal, the research on global warming accelerating ocean acidification, and the identification of the role of the Chinese medicinal food, Dangui, in preventing diseases caused by the PM2.5 attracted the mass media's attention to publicize the research findings. The research results were also accepted by top international journals. National Sun Yat-sen University will continue to dedicate its academic power for the collective well-being and sustainable development of society.

### The First Manned Submersible in Taiwan

Taiwan Ocean Research Institute of the National Applied Research Laboratories, National Defense University, the Jong Shyn Shipbuilding Group, the CSBC Corporation Taiwan, Metal Industries Research & Development Centre, and NSYSU cooperated and jointly announced their investment in the research and development of the first manned submersible constructed in Taiwan and their partnership in cultivating talent in relevant industrial fields. Through



## 提早預測瘋狗浪 與法國兩校聯手探究

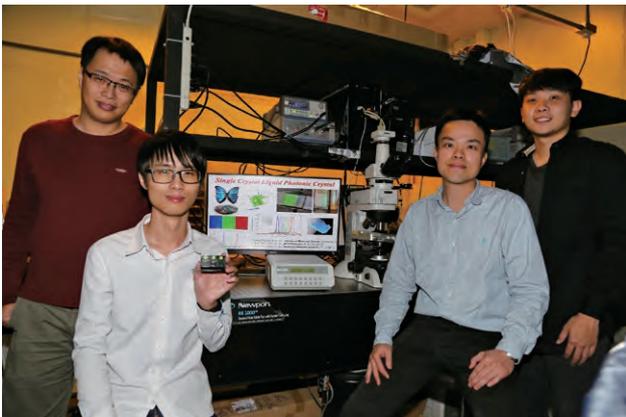
「瘋狗浪」突襲，造成人類生命財產損失的憾事時有所聞，科學界針對瘋狗浪（學名稱極端波浪或異常波浪）已有熱切研究。本校校長鄭英耀與前副校長陳陽益率隊赴法國艾克斯—馬賽大學與馬賽中央理工學院簽署合作備忘錄，並與兩校的共同實驗室—非線性紊流研究中心，和法國氣象局研擬提出台法國際合作計畫，期能利用理論、數值與水工模型試驗等方法，建立台灣四周海域瘋狗浪的預測模式與預警系統，降低憾事發生的可能性。

the cooperation of industry, academia, and research, the six major units have collaborated to form the Manned Submersible Development Alliance, which plans to construct a manned underwater vehicle (submersible) within five years for scientific and technological research, and actively cultivate relevant talents. This is expected to accelerate the progress of ongoing marine green-energy projects in Taiwan, including offshore wind power, Kuroshio power plants, and deep ocean water as well as support military joint training, military survey, and underwater rescue.

### Early Prediction of Rogue Waves: Cooperation Between NSYSU and Two French Universities

Rogue waves have been causing death and property damage from time to time. The scientific community has long been attempting to study rogue waves (also referred to as freak waves). The President of NSYSU, Cheng Ying-Yao, and the former senior vice president, Chen Yang-Yih, led a team to Aix-Marseille University in France as well as to École Centrale de Marseille, where the three parties signed a memorandum of cooperation. The NSYSU delegates also developed a plan for international cooperation between the joint laboratories of the two schools: the Center for Nonlinear Turbulence Research and the French Meteorological Agency. In doing so, theory as well as numerical and physical experiments could be utilized to establish a prediction model and early-warning system for the rogue waves surrounding Taiwan, thus reducing the occurrence of casualty events.





### 科學大突破！ 研發全球最大光子晶體

光電工程學系特聘教授林宗賢團隊投入「單晶結構三維光子晶體」研究，透過台、美雙邊合作，歷時兩年多，成功做出目前世界上最大的三維單晶光子晶體，並展示其優異的光電特性，傑出研發成果登上國際頂尖期刊「自然通訊」。這項研究成果將三維液態光子晶體從過去的數十微米，一舉推進至數千微米；數百倍的成長，突破了傳統人造光子晶體的極限，未來可應用於大幅度調控微型三維雷射、飛秒超快脈衝調製及各式光子元件。

### 暖化加快深海酸化 跨國研究登頂尖期刊

海洋科學系講座教授陳鎮東主導台日合作團隊，發表全球變遷研究「全球暖化將加快深海海水酸化」，登上國際頂尖期刊「自然氣候變遷」。本研究以日本海為例，證明暖化可能會加快深海海水酸化。根據最新研究發現，在比較酸的海水中成長的仔魚，有些魚種的聽力會出現相當程度的受損，難以聽到獵食者靠近的聲音，大大降低其生存機會。從目前的研究結果可見，未來海水酸化將衝擊到海洋生態以及漁業發展。

## A Significant Scientific Breakthrough: The World's Largest Photonic Crystal

A team led by the distinguished professor Lin Tsung-Hsien from the Department of Photonics invested in the research of a three-dimensional photonic crystal with a single-crystal structure. Through bilateral cooperation between Taiwan and the United States, they successfully produced the world's largest single-crystal three-dimensional photonic crystal in two years and demonstrated its excellent photoelectric characteristics. The outstanding research and development results were presented in the top international journal Nature Communications and have prompted the development of three-dimensional liquid photonic crystals ranging from tens to thousands of micrometers. Such an increase in hundredfold signifies a breakthrough in the limitations of traditional artificial photonic crystals, and indicates that the research can be used in the future to effectively control microscopic three-dimensional lasers, femtosecond ultrafast pulse modulation, and various photonic elements.

## Deep Oceans May Acidify Faster Than Anticipated as a Result of Global Warming: Interdisciplinary Research Published in a Prestigious Journal

Chen Chen-Tung, chair professor of the Department of Oceanography, led a Taiwan–Japan cooperation team and published a paper entitled "Deep Oceans May Acidify Faster than Anticipated Due to Global Warming" in the international top journal Nature Climate Change. This study takes the Sea of Japan as an example and proves that global warming may accelerate the acidification of deep sea water. According to contemporary research, the acidic seawater will considerably damage the hearing of some fish species when they are growing as larvae. They will thus experience difficulty in hearing nearby predators, greatly reducing their chances of survival. It can be foreseen from the current research results that the future acidification of seawater will affect marine ecology and fish reproduction.





### 當歸科學證實可活血 活性成分可望防 PM2.5 病變

當歸補血行氣係金 A！《本草綱目》中記載「當歸」可以「和血補血」，化學系副教授王家蓁研究團隊首度以科學方法證實「幾千年來老祖宗的智慧不是隨便說說」，她發現當歸中的一種活性成分確實能調節並提升血液輸送及釋放氧氣至器官及細胞周邊組織的生物功能。此一系列研究成果目前已有 5 項獲核准之中華民國及美國專利，並獲國際知名期刊《科學報告》刊登，未來經由動物與人體實驗，將可望應用在阿茲海默症、血液疾病、心血管疾病之新藥開發及 PM2.5 引起疾病之預防。

### 跨校研究： 男性看到美女誠實度會下降

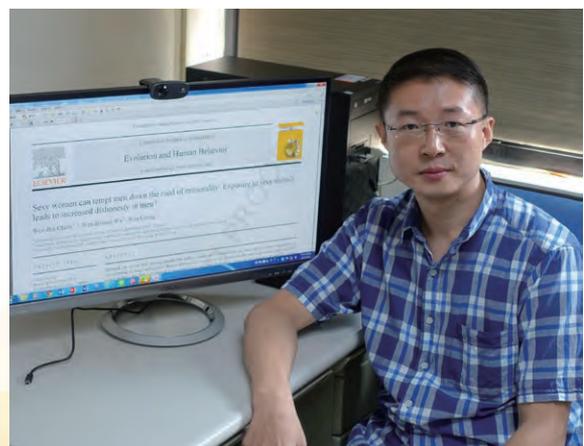
男性看到美女容易變得不誠實?! 教育所教授邱文彬、師資培育中心副教授鄭雯與高雄醫學大學教授吳文雄跨校合作，進行「性感美女能誘使男性墮入不道德之路」研究發現，性感美女雖然君子好逑，但她們容易誘使男性使用不當手段追求，研究結果榮獲國際知名期刊「演化與人類行為」線上刊出，並獲得美國《今日心理學》、《太平洋標準》雜誌，英國

## Angelica Sinensis Scientifically Proved to Reinforce Blood Function- identified Bioactive Components Shedding Light in Preventing PM2.5-induced Diseases

Angelica sinensis is now scientifically proved to indeed exhibit the capacity to enhance the biological function of blood and invigorate the body, as long described in the ancient Chinese medicine book Compendium of Materia Medica. The research team led by Associate Professor Chia-Chen Wang of the Department of Chemistry scientifically confirmed for the first time that the wisdom of ancestors developed in thousands of years is indeed accurate. She discovered that the bioactive components in Angelica sinensis can indeed regulate and enhance the biological function of blood in delivering and releasing oxygen. This set of new discovery have been granted five patents in Taiwan and in the United States. The study was published in the prestigious international journal Scientific Reports. By continuing with animal and clinical studies, this new drug candidate sheds new light in treating Alzheimer's disease, blood diseases, cardiovascular diseases, and in treating or even preventing a variety of PM2.5-induced diseases.

## Cross-School Research: Men Tend to Be Less Honest in the Presence of Beautiful Women

The question of whether men tend to become less honest in the presence of beautiful women was addressed by Professor Chiou Wen-Bin from the Institute of Education, Associate Professor Cheng Wen from the Center for Teacher Education, and Professor Wu Wen-Hsiung from Kaohsiung Medical University. Cross-school collaboration was conducted to investigate whether sexy and beautiful women have the power to lead men onto the path of dishonesty. The study, which revealed that although sexy women were perused by men, they may further induce men to pursue them through improper means, was published in the prestigious online journal Evolution and Human Behavior. The study





《每日郵報》，以及紐西蘭《Herald News》、《The Hits》的專欄報導，受到國際關注。

### 國手教你打羽球！ 創建穿戴式教學系統

國手不必現身，就能教你打羽球！資訊管理學系講座教授陳年興團隊成功研發「穿戴式科技羽球教學輔助系統」，透過穿戴式手環收集我國羽球國手曾敏豪、陳曉歡、林上凱及林國欽四人揮拍擊球時，前臂肌肉使用的力道狀況，再與學生相互比對，提供即時回饋校正。研究團隊將這套系統運用在學校的羽球課上，經過八週測試，發現學生的羽球技巧明顯提升。此系統未來還可應用於高爾夫球、網球、桌球等其他運動項目中，使教師多了一項更客觀的教學工具。

received international attention, with special columns dedicated to it in the US magazines Psychology Today and Pacific Standard, the British Daily Mail, as well as the New Zealand Herald News and The Hits.

### Professionals Teach You to Play Badminton! NSYSU Develops Wearable Learning System for Badminton

A research team led by Nian-Shing Chen, Chair Professor of the Department of Information Management, successfully developed a wearable learning system for badminton training. This system provides instant feedback and correction regarding students' forearm muscle-power exertion in their racket swings. The feedback is based on the experts' database extracted from four prominent professional badminton players in Taiwan: Min-Hao Tseng, Hsiao-Huan Chen, Shang-Kai Lin, and Kuo-Chin Lin. The wearable learning system was used in a badminton course at the National Sun Yat-sen University for 8 weeks, and the students' badminton skills were reported to be improved considerably. This system may also be applied to other sports, such as golf, tennis, and table tennis, providing teachers with an objective teaching tool.



### 用鋼琴彈出一棵樹 跨域合作音樂作畫

觸動琴鍵，螢幕上居然慢慢長出一棵樹？！本校音樂學系教授應廣儀和機械與機電工程學系教授程啟正首創跨領域「音樂作畫」，透過偵測樂器的頻率、振幅與漸強漸弱等聲音參數，利用演算法轉換成視覺上的點、線、面；在樂曲演奏時藉由「觸發音」同步呈現動畫，讓音樂與畫作合而為一。這項跨域合作未來可望應用於互動遊戲、醫療復健與藝術治療等領域。

### Interdisciplinary "Music Painting" : Painting a Tree by Playing the Piano

Professor Ying Kwang-I from the Department of Music and Professor Cheng Chi-Cheng from the Department of Mechanical and Electro-Mechanical Engineering developed an interdisciplinary "music painting" algorithm. The algorithm detects sound parameters, such as frequency, amplitude, and intensity and converts sounds into visual points, lines, and planes. When music is played, the animation is synchronized with the sounds originating from the instrument to combine music with the painting. This interdisciplinary collaboration is expected to be used in the fields of interactive games, medical rehabilitation, and art therapy.



### 剖析霸凌誤判 成果登國際期刊

面對台灣各類校園霸凌事件，教師是否皆能準確辨識不誤判？本校教育所暨師培中心副教授陳利銘、副教授鄭雯及博士生宋宥賢等人組成研究團隊，針對全國中小學教師的校園霸凌辨識情形進行研究，發現校園霸凌事件的正確辨識率約8成，仍有2成案例遭誤判，像是將校園霸凌誤認為一般衝突事件，或將一般衝突事件誤判為霸凌事件。經過實驗證實，接受霸凌辨識訓練確實能提升教師對校園霸凌的正確辨識度，研究結果登上《亞太教育研究者》國際期刊。

### 電商中心調查： 實戰人才為企業轉型關鍵

電子商務研究中心與阿里巴巴合作進行「2018年台灣跨境電子商務人才需求」調查，研究結果顯示，近6成的台灣中小企業都遇到「專業電商人才招募困難」的問題；多達7成企業希望由「通才」來負責跨境電商業務；另有75%的企業認為，社會新鮮人解決問題的能力不強，可見具有實戰經驗及跨領域能力是跨境電商人才不可或缺的能力。電商中心主任梁定澎強調，目前針對跨境電商人才培育的教材規劃及課程開設仍有待加強，政府未來可以結合相關單位及學校，在課程與教材方面進行規劃。

### Results of Bullying Misrecognition Analysis Published in an International Journal

Facing all types of bullying incidents among Taiwanese students, can teachers accurately identify such incidents without misjudging them? Associate Professor Chen Li-Ming from the Institute of Education and the Center for Teacher Education, Associate Professor Cheng Wen, and Ph.D. student Sung Yu-Hsien formed a research team to study the phenomenon of bullying in elementary and junior high schools across Taiwan and investigated whether teachers can accurately identify such occurrences. They found that the rate of accurate recognition of bullying incidents was approximately 80%, with 20% of the cases being misjudged, such as in the event of a bullying episode being mistaken for a general conflict. The experimental results, published in the *Asia-Pacific Education Researcher*, confirmed that receiving bullying-identification training can help teachers to improve their ability to accurately identify bullying episodes.

### E-Commerce Research Center Survey: Practical Talents Are the Key to Business Transformation

The Electronic Commerce Research Center (ECRC) and Alibaba Group Holding Limited (Taiwan) collaborated on the "Talents Demand of Cross-Border E-Commerce in Taiwan 2018" survey. The study finds that nearly 60% of Taiwanese Small and medium-sized enterprises face the difficulty of recruiting professional e-commerce personnel. Platform operations and online marketing are the most demanded talents. As many as 70% of enterprises intend to recruit interdisciplinary talents to manage cross-border e-commerce businesses. Furthermore, around 75% of the informants indicate that fresh graduates do not have adequate problem-solving abilities. Practical experience and interdisciplinary capabilities are regarded as essential. Professor Ting-Peng Liang, Director of ECRC, emphasizes that current educational programs and curriculum development for cross-border e-commerce needs significant strengthening. The government can support universities and related institutions to actively support curriculum planning and enhance talent cultivation.

### 榮譽與獎項 106 學年度 (2017-2018)

教育部終身國家講座	謝曉星 梁定澎
教育部國家講座	黃志青 翁金輅
教育部師鐸獎	蔡秀芬 嚴成文
科技部傑出研究獎	郭紹偉 邱兆民
科技部吳大猷先生紀念獎	詹揚翔
傑出講座	梁定澎 黃志青 翁金輅
中山講座	翁金輅 沈博彥 吳致寧 林煥祥 陳鎮東 陳年興 盧展南 周明奇
西灣講座	魏蓬生 陳年興 周明奇 高志明 張鼎張
特聘教授 (學術研究類)	林哲信 周明奇 洪瑞兒 吳慧芬 高志明 鄭英耀 許志宏 劉祖乾 戴景賢 洪子聖 楊淑珺 賴錫三 紀乃文 陳陽益 洪慶章 張鼎張 劉承宗 郭紹偉 李宗霖 曾韋龍 林宗賢 邱兆民 林淵淙 楊淑晴
特聘教授 (產學研究類)	黃英哲 李宗南 謝建台
傑出教師 (教學類)	莊子肇 于欽平 鄭 雯
特聘年輕學者	詹揚翔 徐士傑 李祁芳 陳健群 蔡維哲 陳威翔 陳利銘 廖子嫻
榮譽講座教授	劉維琪 馬振基 翁啟惠 吳靜吉 邱炎春 謝曉星 吳玉山 余劫離 張少書 張華華 江台章 Paul K.L. Yu Christian Serge Kharif Shelley Fisher Fishkin Franco Maloberti

### Honors and Awards (2017-2018)

Lifetime National Chair Professorship, Ministry of Education	Shou-shing Hsieh , Ting-peng Liang
National Chair Professor, Ministry of Education	Jacob Chih-ching Huang , Kin-lu Wong
Excellent Teacher Awards, Ministry of Education	Shiow-Fon Tsay , Chen-Wen Yen
Outstanding Research Award, Ministry of Science and Technology	Shiao-Wei Kuo , Chao-Min Chiu
Ta-Yu Wu Memorial Award, Ministry of Science and Technology	Yang-Hsiang Chan
NSYSU Distinguished Chair Professor	Ting-peng Liang , Jacob Chih-ching Huang , Kin-lu Wong
Sun Yat-sen Chair Professor	Kin-lu Wong , Pou-Yan Shen , Jyh-Lin Wu , Huann-shyang Lin , Chen-tung Arthur Chen , Nian-shing Chen , Chan-Nan Lu , Ming-Chi Chou
Siwan Chair Professor	Peng-Sheng Wei , Nian-shing Chen , Ming-Chi Chou , Jimmy C. M. Kao , Ting-Chang Chang
Distinguished Professor, Research	Che-Hsin Lin , Ming-Chi Chou , Zuway-R Hong , Hui-fen Wu , Jimmy C. M. Kao , Ying-Yao Cheng , Jyh-Horng Sheu , James T. Liu , Ching-hsien Tai , Tzyy-Sheng Horng , Shu-Chun S. Yang , His-San Lai , Nai-wen Chi , Yang-Yih Chen , Chin-Chang Hung , Ting-Chang Chang , Cheng-Tsung Liu , Shiao-wei Kuo , Chon-Lin Lee , Wei-Lung Tseng , Tsung-Hsien Lin , Chao-Min Chiu , Yuan-Chung Lin , Shu-Ching Yang
Distinguished Professor, Industry-Academy Research	Ing-Jer Huang , Chung-Nan Lee , Jen-Taie Shiea
Outstanding Teaching Faculty	Dr. Tzu-Chao Chuang , Dr. Chin-Ping Yu Dr. Wen Cheng
Distinguished Junior Research Scholar	Yang-Hsiang Chan , Jack Shih-Chieh Hsu , Chi-fang Sophia Li , Chien Chun Chen , Wei-Che Tsai , Wei-Hsiang Chen , Li-Ming Chen , Zi-Xian Liao
Emeritus Chair Professor	Victor W. Liu , Chen-Chi M. Ma Chi-Huey Wong , Jing-Jyi Wu Iam-Choon Khoo , Shou-Shing Hsieh Yu-Shan Wu , Paul K.L. Yu Christian Serge Kharif , Shelley Fisher Fishkin Gordon H. Chang , Hua-Hua Chang Tai-Chang Chiang , Franco Maloberti



# NSYSU



# 專業教育

## Professional Education

社會變動快速，學生除了學習專業，更需跨域知能，大學教育不再拘泥於傳統教學，自主、跨域學習時代已來臨。本校調整發展方向，培育時代優質人才，打破學科藩籬，推動跨域共學群課程，打造學習生態系統，107 學年度成立「人文暨科技跨領域學士學位學程」及「西灣學院」。除本校山海特色課程，也順應時代潮流開設虛擬實境、AI 機器人課程，學生於藝文、體育、研究等各領域競賽皆有傑出表現。

### 跨域翻轉教學 高教深耕共學群啟動

「一個中山的共學運動」首波整合 15 個跨領域共學群，以跨領域議題為導向，打破傳統科系的學習界線。各共學群分別開設整合學程（15 學分）或微學程（9 學分），可依興趣選擇跨領域多元專長，建立跨領域學習深度，針對不同領域的學生規劃不同的學習路徑，全面培育具備跨域知能及解決複雜社會問題之優質人才。

The contemporary society changes rapidly. In addition to acquiring professional knowledge related to one's major, students must expand their knowledge and capability to other fields. University education is no longer limited to conventional teaching. The era of autonomous and interdisciplinary learning has arrived. National Sun Yat-sen University (NSYSU) had adjusted its direction of development, fostering top-notch talents, overcoming the barriers between disciplines, promoting interdisciplinary courses, and constructing a learning ecosystem. In the 2018 academic year, the program in Interdisciplinary Studies for undergraduate students and the Sizihwan Innovative Institute were established. In addition to the school's characteristic courses, NSYSU is also opening courses on virtual reality and AI robots in accordance with the modern trends. Students also demonstrate outstanding performances in various fields, such as art and humanities, sports, and research.

### Interdisciplinary Flipped Teaching Activated High Education Co-learning Groups

The first wave of the NSYSU Co-learning Movement integrated 15 interdisciplinary co-learning groups that were oriented toward overcoming the boundaries of traditional disciplines and departments. Each co-learning group has a special integrated program (15 credits) or micro-program (9 credits). The students may select interdisciplinary classes based on their interests, and achieve in-depth learning across disciplines. For students of different fields, different learning paths are planned for them. In this respect, we will foster outstanding students with interdisciplinary knowledge and capability to resolve complex social problems.





### 新設「人文暨科技跨領域 學士學位學程」開啟創新視野

107 學年度成立校級「人文暨科技跨領域學士學位學程」，透過對內招生及活化轉系制度，提供學生「專業學系進、校級跨領域學程出」的學習路徑。著重跨領域導向人文與科技專業領域、議題導向「共學群」合作開設專題課程、以及實作導向「微學分」課程等三個主軸的搭配延伸，藉由跨域碰撞，實踐學生面對與實踐問題的理念，也引進不同領域的專業教師及業界教師系統，與產業及社區建立更緊密的對話與聯繫空間。

### 「海納百川」計畫啟動 特殊選才比例全國最高

國立中山大學「海納百川」特殊選才招生自 105 學年度起獨立招收具特殊才能或不同教育資歷的學生，107 學年度共 338 名高中生報名，16 個學系共招收 44 個名額（含部分弱勢優先入學名額），108 學年度將有 17 個學系招收 56 個名額，為全國占招生名額比例最高的大專校院。

### The New Undergraduate Program in Interdisciplinary Studies Establishes a New Vision

In the academic year of 2018, the Undergraduate Program in Interdisciplinary Studies was established. Through internal recruitment and introduction of the possibility to transfer to another department, NSYSU provides students with a learning path for entering the school at a specialized department but graduating from interdisciplinary programs. NSYSU focuses on the interdisciplinary orientation of humanities and technology professions, the topic-oriented co-study group cooperation to offer seminars, and the implementation of the micro-credit course. Through the cooperation and the expansion of these aspects and through interdisciplinary encounters, students learn to face and solve problems. Through the introduction of professional teachers and experts from different industries, students can conduct intimate dialogues and establish close connection with the industry and the community.

### The All Encompass Project Led to the Highest Enrollment Percentage of Students with Special Talents

The All Encompass project, which in Chinese means "all rivers run into the sea", has independently recruited many individual students with special talents or diverse educational qualifications since the academic year of 2018. In total, 338 high school students applied to it this year, and 16 faculties recruited 44 to meet quotas (including some for disadvantaged admission). It will become 17 faculties recruited 56 to meet quotas in academic year of 2019, which is the highest enrollment percentage of any college in Taiwan.

## 風帆特色運動台日交流 大專競賽奪雙金

本校依山傍海，擁有得天獨厚的地理環境，發展風帆、潛水等海洋特色課程。風帆社與日本大阪大學交流互訪，創下台灣與日本大學之間以帆船運動進行交流的首例。學生參與競賽表現傑出，於大專院校年度帆船錦標賽囊括帆船男女組兩面金牌。

## 跨足世界 師資生首獲教育部補助 赴美見習

在教育部「無國界教師計畫」的支持下，師資培育中心洪瑞兒主任和通識教育中心林煥祥講座教授率領 8 名師資生前往美國北伊利諾大學暨 Sycamore 高中展開海外教育見習之旅。藉由參訪、旁聽美式師資；培育課程及實際觀摩高中授課方式，體驗西方教學環境與文化，同時吸收多元的教育理念和絕佳的教學策略。



## Exchange Visits with Osaka University Based On Sailing. Double Gold in the College Sailing Championship

NSYSU is surrounded by mountains and seas and has a unique geographical environment for developing marine courses, such as sailing and diving. The NSYSU Sailing Club exchanged visits with Osaka University in Japan, setting the first example of sailing-based exchanges between Taiwanese and Japanese universities. Students participated in the competition and performed outstandingly. In the annual college sailing championship, they won two gold medals in the men's and women's team.

## Overseas Education Apprenticeship for Pre-service Student-teachers Sponsored by the Ministry of Education

From the support of the Taiwan's Ministry of Education's Project "Teachers Without Borders", the director of the Center for Teacher Education, Zuway-R Hong and Chair Professor of the Center for General Education, Huann-Shyang Lin, led 8 pre-service Student-teachers to the Northern Illinois University and Sycamore High School in USA to conduct an overseas education apprenticeship. These Student-teachers attended American's teacher-training courses and observed firsthand the teaching strategies used in U.S. high schools. They experienced Western style teaching and culture while absorbing diverse educational concepts and great teaching strategies.





### 企管系陳彥成奪世大運 2 金 陳映竹 2 金 1 銀入袋

國立中山大學企管系大四學生陳彥成，在 2017 年台灣世大運競速滑輪溜冰男子 1 萬公尺計分淘汰賽中，為台灣拿下首金！隨後也在男子 3000 公尺接力賽奪冠。同系的陳映竹則在女子 500 公尺爭先賽、女子 3000 公尺接力奪金、300 公尺計時賽摘銀，兩人同為台灣爭光。

### 教育所攜手比利時根特大學 簽署雙聯博士學位

教育研究所與比利時根特大學教育研究學系簽訂跨國雙聯博士學位，參與的博士生最快僅需四年便可取得兩校頒發的博士學位。就讀教育所的宋宥賢為計畫首位博士生，他辭去國中教職至本校進修，參與此計畫一圓留學夢，未來希望精進自身專業能力。

### Chen Yen-Cheng Wins Two Gold Medals. Chen Ying-Chu Wins Two Gold and One Silver

Chen Yen-Cheng, a senior student in the Department of Business Management, won the very first golden medal for Taiwan in the 2017 Summer Universiade inline speed skating 10000M elimination match. He then won the men's 3000M relay race. Another student from the same department, Chen Ying-Chu, won the golden medal in the women's 500M competition and the women's 3000M relay race, and won a silver medal in the 300M time trial. Both students won honor for Taiwan.

### The Institute of Education of NSYSU and the University of Ghent, Belgium, Signed a Joint Dual Ph.D. Degree

The Institute of Education, NSYSU, Taiwan, has signed a joint dual doctoral degree agreement with the Department of Educational Studies, University of Ghent, Belgium. Participating Ph.D. students can receive a joint Ph.D. from the two universities within four years. Yu-Hsian Sung, who is studying at the Institute of Education, NSYSU, is the first doctoral student to participate in this program. He resigned from his job as a junior high school teacher to study at NSYSU and to achieve his dream of studying abroad. He hopes to improve his professional skills in the future.

## 社區就是我的教室 公事所推食農教育

公共事務管理研究所開設「公共事務與管理」和「非營利組織管理研討」課程，師生前進旗山百年糖廠展開現地教學活動。觀察糖廠發展脈絡與地方關係連結歷史，也實地了解社區復舊創新，體驗社區傳統技藝及循環經濟，鼓勵學子投身現正創新發展的產業，並參與食農體驗活動。

## 管院首度跨系所南向見習 師生赴泰海外參訪

台灣啟動新南向政策以尋求經濟發展新動能，管理學院響應政策，首度組成跨系所團隊前進海外見習。IBMBA 宋兆賢老師帶領管理學院學生前往泰國正大管理學院參訪，除了針對東協國家商業環境的密集研討課程、企業參訪和泰國文化體驗，也讓臺灣學生能深度了解東協國家商業環境和東南亞規模最大、最具影響力企業之一的泰國正大集團。

## "The Community is My Classroom". The Institute of Public Affairs Management Promotes Farming and School Education

For two courses offered by the Institute of Public Affairs Management, "Public Affairs and Management" and "Non-profit Organization Management Seminar", teachers and students went to the 100-year sugar factory in Cishan to engage in on-site teaching activities. In doing so, they became acquainted with the development trend of the sugar factory and its historical connection with the local communities. Moreover, they learned about community rejuvenation and innovation, and experienced the community's traditional skills and circular economy. Students were encouraged to participate in the industry of innovative development and activities related to food and agriculture education.

## Students from the College of Management Conducted Overseas Visits to Thailand

Taiwan launched the New Southbound Policy to seek new momentum in economic development. The College of Management corresponds to the policy and formed the first interdisciplinary team to have apprenticeship abroad. Dr. Sung Chao-Hsien, professor of the International Business MBA, led students in the College of Management on a visit to the Thailand Panyapiwat Institute of Management. In addition to participating in intensive seminars on the business environment of the Association of Southeast Asian Nations, conducting corporate visits, and experiencing Thai culture, Taiwanese students acquired a deeper understanding of the business environment of the Association of Southeast Asian Nations and one of the largest and most influential enterprises in Southeast Asia, the Chia Tai Group in Thailand.



## 引進專業資源 劇藝系設業師工作坊

劇場結合設計、技術、導演、表演、管理等各項專業，蘊含大量的史學、美學、創造力與實作的訓練，為了在有限的專、兼任師資與課程限制下，提供學生更多元、豐富的認識與理解，劇藝系邀請專業人士開設創作、舞臺設計、影視表演、鈴木演員訓練、獨白表演等短期工作坊，讓學生開拓眼界，持續精進創造、思考能力與技術的磨練。

## 音樂跨域工設 高齡照護輔具展成果

呼應長照 2.0 政策，音樂系開設「音樂於高齡照護之設計與運用」課程，結合「音樂應用」與「工業設計」跨領域專業知識，透過在醫療機構長照中心實作，設計出適合高齡的音樂藝術活動及符合需求的輔具、復健器材，學生與高雄榮民總醫院日照中心長者互動，實踐社會關懷的大學責任。

## Introducing Professional Resources: Training Workshops in the Department of Theater Arts

Theater arts is a highly specialized field combining audio-visual design and techniques; acting and directing; and marketing and management. In addition, it requires solid trainings in history, aesthetics, critical and creative thinking. In order to provide the students with well-rounded trainings in all aspects, the Department of Theatre Arts, given that the faculty members are limited, invites professionals to conduct short-term training workshops, such as creative playwriting and directing, stage design, acting for the screen, the Suzuki method, and monologue techniques, just to name a few. With these added professional workshops, the department seeks to broaden horizons for students, hoping they will increase capacities for creativity and critical thinking as well as improve professional skills.

## Music is Introduced as an Assistive Device in Long-Term Care Centers for Older Persons

In response to the Long-Term Care Policy 2.0, the Department of Music offers the course "Design and Application of Music in the Care for Older Persons," to provide interdisciplinary knowledge combining music application and industrial design. Participants will have hands-on experiences in a long-term care medical center to design music and art activities and accessories and incorporating assistive devices and rehabilitation equipment to fit the older persons' needs.

Students will also have the opportunities to exercising the University's responsibility on social care with the Center for Geriatrics and Gerontology, Kaohsiung Veterans General Hospital.



## 自己的 5G 自己造 資工團隊獲開源軟體程式冠軍

資工系學生吳健民、張為捷、林冠華合組「造飛機，我們準備要飛」團隊，參加「2017 開源天下 - 全國大專校院開源軟體程式創意設計競賽」，團隊作品以每個人都可實現自己的 5G 通訊設計，獲得評審團好評，勇奪競賽冠軍。

## 鑽研古董保時捷 機電系曾逸敦開課出書

機械與機電工程學系教授曾逸敦十多年前為了走出情緒憂谷，一頭栽進古董車的世界，經過不斷地研讀資料、向保養廠技師請教，累積了深厚的汽車知識。曾逸敦不但在校內開設「汽車學」和「世界汽車發展史」課程、出書分享，還替民間維修廠撰寫「法拉利保養手冊」；未來他計畫結合虛擬實境（VR），研發「虛擬修車」技術，除了幫助學生學習，希望也能成為維修技師的培訓系統，提升台灣車輛維修的知識與素質。

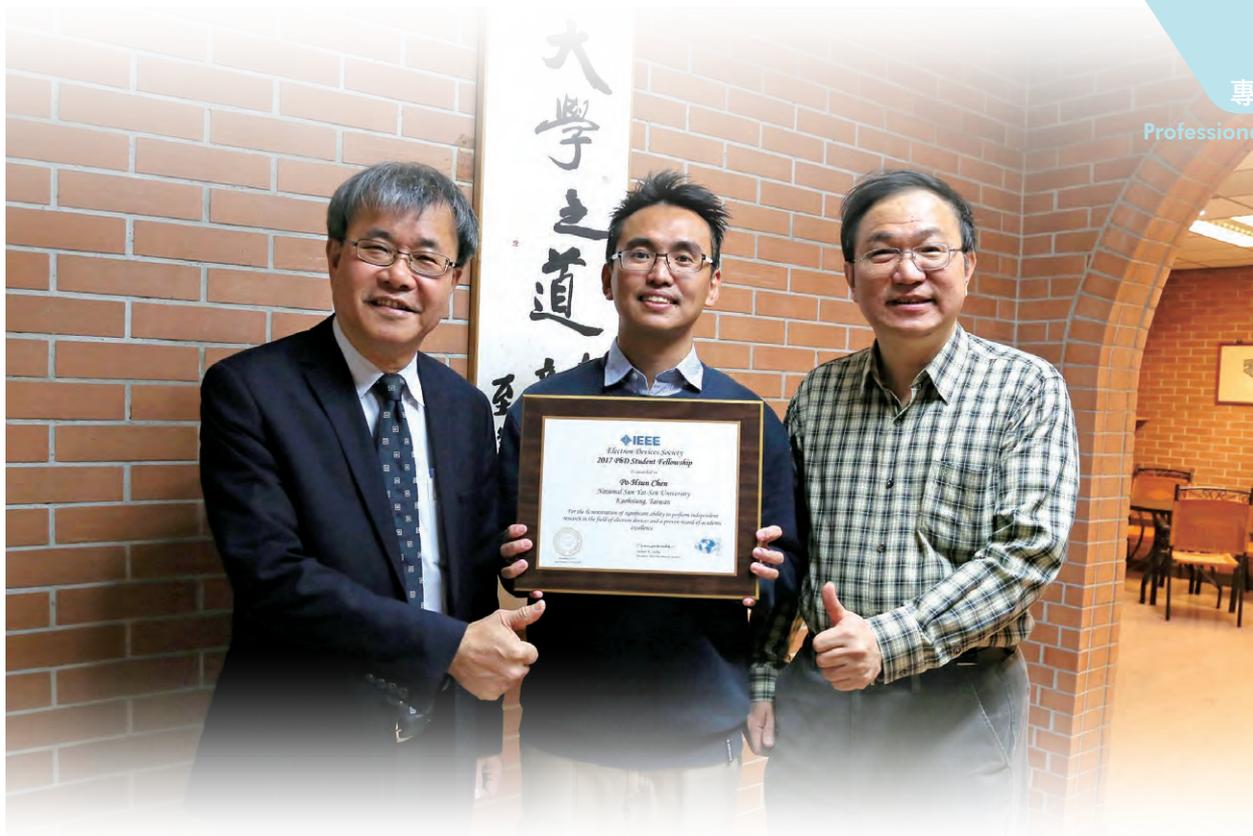
## A Group of Students from the Department of Computer Science and Engineering Won the Open Source Software Competition

Jian-Min Wu, Wei-Jie Chang, and Guan-Hua Lin, who are all students in the Department of Computer Science and Engineering, formed a team named "Construction of Aircraft — We Are Ready to Take Off" to participate in the 2017 Taiwan Open Source Software Creative Design Competition. The team presented a 5G communication prototype using open sources and applied to the remote control of UAV. Their idea received the acclaim of a panel of judges that led to win the champion.

## The Study of Vintage Porsches Was the Sparkle that Made Tseng Yih-Tun Open a Course and Publish a Book on the Topic of Vehicle Engineering

Professor Tseng Yih-Tun, from the Department of Mechanical and Electro-Mechanical Engineering, dove into the world of vintage cars more than ten years ago for the purpose of overcoming his depressive moods. After continually studying related materials and consulting with the maintenance technicians, he has accumulated profound knowledge of these antique automobiles. Tseng has offered some courses related to the world of automobiles, such as "vehicle engineering" and the "world auto development history," has published a book on the topic, and wrote the "Ferrari Maintenance Manual" for private maintenance facilities. In the future, he aims to combine his knowledge with virtual reality to develop virtual car repair technology. In addition to helping students learn, he hopes to construct a training system for maintenance technicians and improve the knowledge and quality of vehicle maintenance in Taiwan.





### 亞洲唯一 物理博士生獲 IEEE 獎學金

物理學系博士班四年級學生陳柏勳擊敗全球眾多菁英學子，榮獲 2017 年國際電機電子工程師學會電子元件學會博士生獎學金，成為亞洲唯一獲獎人。陳柏勳兩年內以第一作者身分發表 7 篇研究論文登上國際期刊，另以共同作者身分發表 15 篇論文，學術質量驚人。

### 生命在中山轉彎 大三生論文登國際頂級期刊

物理系三年級學生王品竣高中畢業時申請上中央大學物理系，因為忙於社團和營隊，大二下差點被二一；為了確認志趣，他選擇重考，進入中山大學就讀。2018 年初，王品竣以大學生身分發表論文「鉍銻碲拓樸絕緣體 (BiSbTe<sub>3</sub>) 薄片的 Aharonov-Bohm 震盪」，獲刊於國際頂級期刊《Applied Physics Letters》，成為實驗室最年輕的期刊作者。

### The Only Ph.D. Student in Physics in Asia Received a Scholarship from the Institute of Electrical and Electronics Engineers

A fourth-year Ph.D student in the Department of Physics, Chen Po-Hsun received the prestigious Institute of Electrical and Electronics Engineers Electron Devices Society PhD Student Fellowship in 2017, beating many elite students from all over the world and becoming the only winner in Asia. In two years, Chen Po-Hsun was the first author of seven papers published in international journals. Additionally, he co-authored 15 more published papers, proving his outstanding academic quality.

### A New Life in NSYSU, with a Paper Published in an International Prestigious Journal in the Third Year

Wang Pin-Chun, a third-year student in the Department of Physics, applied for admission into the Physics Department of the National Central University when he graduated from high school. However, because he was too busy with clubs and various camps, he was almost expelled in his sophomore year. To confirm his interest, he took the university entrance exam and enrolled at National Sun Yat-sen University. At the beginning of 2018, Wang published the paper "The Aharonov-Bohm oscillation in the BiSbTe<sub>3</sub> topological insulator macroflake" as a university student in the prestigious international journal Applied Physics Letters, and he became the youngest journal author in his lab.



### AI 人工智慧 資管系與時俱進設機器人課程

隨著物聯網、雲端運算、智慧機械等技術的快速發展，機器人尖端科技正逐漸改變世界，智慧型機器人儼然成為新興科技不可或缺的一環。本校資訊管理學系結合資訊科技、人工智慧與管理相關課程，提升學生整合、運用新興科技的能力，培育符合企業需求的跨領域人工智慧應用人才。

### 校園證券投資智慧王 財管系囊括 2 銀 1 銅

財管系學生組隊參加由臺灣證券交易所舉辦的 2017 年「第 14 屆校園證券投資智慧王一大專院校知識競賽」，歷經激烈的初賽、複賽，成績囊括 2 銀 1 銅。

### A New Artificial Intelligence and Robotics Course at the Department of Information Management to Keep up with the times

With rapid technological development, such as in that of the Internet of Things, cloud computing, and smart machinery, cutting-edge robot technology is gradually changing the world, and intelligent robots have become an indispensable component of emerging technologies. The Department of Information Management combines information technology, artificial intelligence, and management-related courses to enhance the ability of students to integrate and apply emerging technologies as well as cultivate talents who are able to work with interdisciplinary AI applications that meet the needs of enterprises.

### Two Silver Medals and One Bronze Medal Awarded to Students from the Department of Finance in a Competition Organized by the Taiwan Stock Exchange

A group of students from the Department of Finance participated in the 2017 "14th Campus Securities Investment Wisdom King—College Knowledge Competition" organized by the Taiwan Stock Exchange. After a fierce preliminary and semi-final competition, the students won 2 silver medals and 1 bronze medal.

### 全球魚客松高雄場 本校勇奪 3 大獎

本校學生團隊參加 2018 年全球 Fishackathon 魚客松高雄場，團隊從 16 組隊伍中脫穎而出，抱回亞軍、養殖漁業創新獎、遠洋漁業創新獎三項大獎，表現傑出，為最大贏家。

### 全國英文演講競賽 學生抱回金銀佳作

外國語文學系一年級的徐誠甫、康寧漢與企管系一年級范鐘元參加本校與美國在台協會合辦的全國大專院校英文演講暨高中生英文詩歌朗誦競賽，表現傑出，從眾多參賽學生中抱回冠、亞軍及佳作獎項。有別於多數人選材，中山學生以音樂及節慶入題，獨特有趣的內容贏得由美國在台協會官員與語言相關系所教授所組成的評審團青睞。

### 虛實結合跨境體驗 資管團隊奪資訊競賽首獎

資管系學生駱群亦、鄧鈞岱、徐聖智、陳宥羽、洪紹銘、黎卓林共同開發應用程式「捉簿」APP 專案展示，結合擴增實境（AR）和繪圖軟體，讓使用者能「憑空」劃出 3D 的電腦圖像。創意新潮的專案設計不但讓人大開眼界，也一舉拿下第 22 屆全國大專院校資訊應用服務創新競賽「資訊技術應用組」第一名的殊榮。

### Three Medals in the 2018 Global Fishackathon

A group of students participated in the 2018 Global Fishackathon in Kaohsiung. The team was distinguished among the 16 teams and won the runner-up prize, the Aquaculture Fisheries Innovation Award, and the Offshore Fisheries Innovation Award. They excelled, and this was indeed the greatest victory.

### Students Won Gold and Silver Medals in National English Speech Competition

Cheng-Fu Xu and Ning-Ham Cun, first-year students in the Department of Foreign Languages and Literature, and Chung-Yuan Fan, a first-year student in the Department of Business Management, participated in and excelled themselves in 2017 College English Speech Competition and High School English Poetry Recitation Competition, which was jointly held by the University's English Teaching Center and American Institute in Taiwan. They won gold and silver medals as well as a superior prize. Distinguished from other participants, our students selected music and festivities as their speech topics. Their unique and compelling presentations won them the high praise of the judge panel, which included AIT officials and professors from language-related departments.

### A group of students from the Department of Information Management won first prize at the 22nd National ICT Innovative Services Awards

Students Luo Qun-Yih, Deng Jun-Dai, Hsu Sheng-Chi, Chen You-Yu, Hong Shao-Ming, and Li Zhuo-Lin from the Department of Information Management codeveloped an application that combined Augmented Reality and drawing software to enable users to draw 3D computer images even without the necessary relevant technical skills. The creative and innovative project design was eye-opening and won first prize at the 22nd National ICT Innovative Services Awards in the "Information Technology Application Section".





# NSYSU



# 創新產學

## Innovations in University-Industry Collaboration

「永續城市與社區」做為實踐大學社會責任的發展目標，透過社會關懷、經濟產業協力與地方相互學習，形塑中山成為區域創新生態系統中的大學，提供產業及地方政府創新元素，觸動產業翻轉革新；同時亦有效加速本校教育及技術能量的擴散，開拓多元收益及加值產研連結效益。

對內制定各式鼓勵教師參與產學合作措施，並納入教師升等、評鑑及免評鑑指標，對外籌組南台灣國際產學聯盟，結合高雄科技大學、高雄醫學大學、高雄大學及屏東科技大學，建立南台灣最大產學研鏈結平台，聘請產業聯絡專家協助將各聯盟學校技術能量與產業界鏈結，甚至協助廠商將產品推向國際，持續擴大與在地產業的深耕合作。

2017 年產學合作績效卓越，政府機關及非政府機關產學合作計畫合計達 5.4 億元；技術移轉授權金額約達 3,153 萬元；推廣教育金額約達 5,882 萬元，皆超越年度預期目標。

The goal for National Sun Yat-Sen University (NSYSU) to take the social responsibility was implemented through developing a sustainable city and community. Through social care, economic and industrial cooperation, and learning from the local communities, NSYSU has become a university in the regional innovation ecosystem that provides innovation elements to the industry and the local government, pushing the industrial sector towards reform and renovation. At the same time, it also effectively accelerated the diffusion of the educational and technical capacity of our school, exploring the benefits of diversified income and the links that add value between industry and research.

Internally, we developed various measures for encouraging teachers to participate in industry–university cooperation, and the participations were used as indicators for teacher promotion, evaluation, and exemption from evaluation. Externally, the Southern Taiwan Global Research & Industry Alliance was established, integrating Kaohsiung University of Science and Technology, Kaohsiung Medical University, Kaohsiung University, and Pingtung University of Science and Technology to establish the largest platform for industry–academia–research cooperation in southern Taiwan. We engaged experts in the industry to link the technical capacity of the alliance schools with the industrial sector and even to assist manufacturers in promoting products on the international market while continuing to expand their cooperation with local industries.

The performance of industry–university cooperation in 2017 was excellent. Industry–university cooperation projects involving governmental agencies and non-governmental agencies reached NT\$540 million; the amount of money spent on technology transfer licensing reached approximately NT\$31.53 million, and the amount spent on promoting education reached NT\$58.82 million, all exceeding the annual target.





## 六校攜手牛津 創南臺灣國際產學聯盟

在科技部「國際產學聯盟」計畫的推動下，南臺灣六校產學團隊正式成軍，力拼國際盃！本校統合高雄醫學大學、高雄大學、高雄第一科技大學、高雄應用科技大學（兩校合併為高雄科技大學）及屏東科技大學組建「南臺灣國際產學聯盟」，於2018年1月底揭牌啟動。六校聯盟除致力將學術研究與產業需求緊密結合，更創全國首例，與英國牛津大學 OUI 科技創新的衍生公司—Oxentia 牛津全球創新諮詢公司締約，期能借鏡國際頂尖大學衍生企業的成功經驗，解決業界問題、培育人才並促進學術科研成果商業化，共同打造國際合作平台。

## Southern Taiwan Global Research & Industry Alliance Cooperated with Oxford University

Under the impetus of the Global Research & Industry Alliance program of the Ministry of Science and Technology, six schools in southern Taiwan cooperated with the industry and formed a team to enter the international market. NSYSU integrated with Kaohsiung Medical University, Kaohsiung University, Kaohsiung First University of Science and Technology, Kaohsiung University of Applied Sciences, and Pingtung University of Science and Technology to form the Southern Taiwan Global Research & Industry Alliance, whose operation began at the end of January 2018. This alliance was the first in Taiwan to closely integrate academic research and industrial demand. Additionally, it concluded a treaty with Oxentia, Oxford's Global Innovation Consultancy, a UK-based spinoff of Oxford University Innovation. In doing so, the hope was to learn from the success of leading international universities and solve issues in related sectors, as well as cultivate talent, promote the commercialization of academic research results, and jointly build a platform for international cooperation.

## 結合南部 6 大醫院 培育醫事人才

本校與高雄市聯合、民生、大同、小港、凱旋及鳳山六家市立醫院簽署合作備忘錄，宣示攜手投入學術研究與產學合作，共同培育醫事人才。中山大學校長鄭英耀強調，這是南台灣規模最大的學術與健康醫療鏈結，希望透過中山大學的教育與研究系統，培植優質醫事人才，精進醫療科技研發能量，落實學術與臨床實務接軌，為台灣民眾的醫療品質，貢獻心力。

## Integration of Six Major Hospitals in the South for Cultivating Medical Talent

Our university signed a memorandum of cooperation with six hospitals—namely Kaohsiung Municipal United Hospital, Kaohsiung Municipal Min-Sheng Hospital, Kaohsiung Municipal Ta-Tung Hospital, Kaohsiung Municipal Siaogang Hospital, Kaohsiung Kai-Syuan Psychiatric Hospital, and Kaohsiung Chang Gung Medical Hospital—announcing joint investment in academic research and industry-academia cooperation for the purpose of cultivating medical personnel. The president of NSYSU Cheng Ying-Yao emphasized that this was the largest academic and health care chain in southern Taiwan. It is hoped that the NSYSU education and research system will help facilitate the cultivation of outstanding medical personnel, bolster the research and development capacity of medical technology, and implement academic and clinical practices to contribute to the quality of medical care available to Taiwanese people.



## 四校合組產學聯盟 帶動地方發展

本校與高雄醫學大學、高雄應用科技大學及高雄第一科技大學進駐高雄科學園區，自2017年起10月起共組「菁鑽服務團」並成立聯合服務辦公室。四校共同攜手輔導協助高科園區廠商，促使園區繁榮，增加就業人數，使學術界與產業界緊密結合，形成夥伴關係並優化在地深耕條件，期望吸引更多廠商進駐，共創最大經濟價值。本次四校合作為高雄地區學界合組服務團首例，也是創新產學聯合合作模式，期能透過整合四校產學合作互動，帶動地方產業發展，協助解決產學合作研發與高素質人力資源培養等需求，縮小產學應用落差。

## 與金屬中心聯手 推動人工智慧創新商務應用

本校與財團法人金屬工業研究發展中心建立產學聯盟，並共同舉辦「智慧商務與創新服務論壇」，鄭英耀校長和金屬工業研究發展中心林仁益董事長代表簽署產學合作意願書，未來雙方將合作推動智慧商務與創新服務的研發、教學及產品應用。智慧商務與創新服務是未來商業發展的重要趨勢，本校電子商務研究中心為教育部頂尖研究中心，在電子商務的研究成果居世界前茅。金屬工業研究發展中心在創新服務方面，過去有非常多的產業輔導經驗，透過雙方的策略聯盟，可以為台灣相關產業未來運用人工智慧提升跨境電商及產業智慧服務創新能力的提升，帶來更大幫助。

## Four Schools Forming An Industry-academia Cooperation Group to Boost Local Economy

In October 2017, NSYSU, Kaohsiung Medical University, Kaohsiung University of Applied Sciences, and Kaohsiung First University of Science and Technology formed a Diamond Service Group and establish a joint service office in Kaohsiung Science Park. The four schools worked together to assist high-tech park manufacturers, promote the prosperity of the park, and create more job opportunities. In addition, they facilitated the cooperation between the industry and academia and formed partnerships with the industry to optimize the condition for working at that area and to attract more manufacturers to the park to cocreate maximum economic value. The cooperation between the four schools was the first case of an integrated service group in Kaohsiung area. It was also a joint mode of cooperation between industry and academia that aimed to promote the development of local industries to help meet the needs of industry-academia cooperation research and development and high-quality human resources training as well as narrow the gap in the industry-university applications.

## AI and Innovative Business Applications Are Promoted in Conjunction with the Metal Industries Research and Development Center

NSYSU and the Metal Industries Research and Development Center (MIRDC) built strategic alliance and jointly organized the Smart Commerce and Innovation Service Forum. University President, Dr. Cheng Ying-Yao, and MIRDC Chairman Dr. Lin Ren-Yih signed a memorandum for industry-university cooperation. Two institutions will cooperate to promote research, development, teaching, and industrial application of smart commerce and innovative services. Smart technologies and innovative services are key drivers for future business competitiveness. As a top research center sponsored by the Ministry of Education, the Electronic Commerce Research Center (ECRC) of NSYSU is committed to leading-edge research with outstanding performance in the world. MIRDC is a leading institution in applied research and industrial consultation. The strategic alliance provides a strong force for applying artificial intelligence techniques to enhance business competitiveness in cross-border e-commerce and innovation of smart services.

## 為居家健康把關 醫產學跨界開發 AI 技術

本校與高雄醫學大學附設中和紀念醫院、克魯斯健康科技股份有限公司及華碩簽署合作備忘錄，宣示未來將共同致力發展智慧生活、智能照護服務，攜手提供民眾智能化健康管理服務。本次醫產學界跨域攜手，未來將依據不同服務對象，透過串聯智慧穿戴裝置、物聯網連網健康裝置、會員所量測之血壓、血糖、體溫、血氧等各項健康資訊；再結合雲端傳輸至遠距健康照護系統，由本校醫療機電實驗室負責多維健康資訊的融合與分析、高醫遠距健康照護中心提供智慧健康管理服務，讓用戶同時享有智慧生活及專業醫學中心團隊所提供之智能照護服務，並且還能在家人之間傳遞健康狀況及事件資訊。

## 智慧窗戶隨時變色 師生團隊獲創業傑出獎

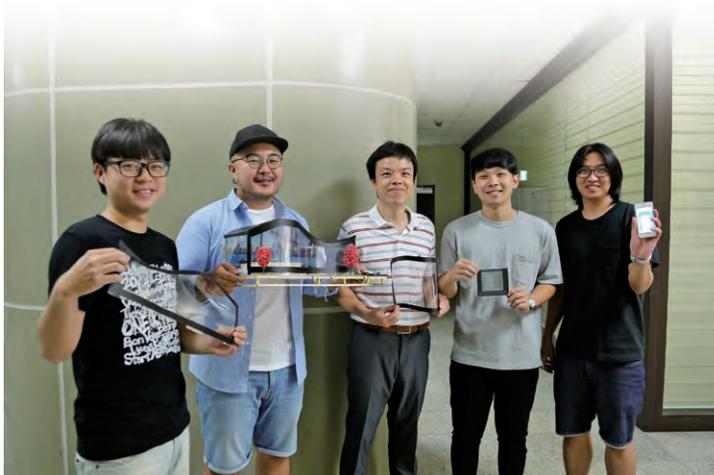
透過手機 APP 遙控，可以隨時變換窗戶顏色！本校光電工程學系特聘教授林宗賢與學生合組「中山液晶」團隊，費時一年多，研發出可貼在玻璃的薄膜，只要透過手機 APP 觸控，就能隨時將玻璃切換成模糊、光暗及變成投影機投影用途等功能，未來可應用在車輛和商辦大樓。這項創新發明從 166 組新創團隊徵件中脫穎而出，榮獲科技部「創業傑出獎」和新台幣 200 萬元獎金。這項產品可應用於不同場合。例如車用玻璃，白天可切換至隔熱狀態以阻隔刺眼的光線與熱能；晚上時，則可切換至透明狀態提供清晰的行車視野。應用於建築玻璃時，使用者能夠主動調控室內外的光線通量，夜晚時也能切換為黑霧狀態以確保生活隱私。多功能智慧型窗戶更可搭配投影設備，在玻璃上呈現高畫質影像，提高擴增實境（AR）的使用體驗。

## Medicine-Industry-Academia Cooperation in Developing AI Technologies for Health-Management Services at Home

NSYSU signed a memorandum of cooperation with Kaohsiung Medical University Chung-Ho Memorial Hospital, Crux Health Tech. CO., Ltd., and AsusTek Computer Inc., announcing their future joint development of smart life and care services and their offering of intelligent health-management services. This interdisciplinary cooperation among medicine, industry, and academia will tailor to users' needs. In the future, a series of smart wearable devices, Internet of Things health devices, and information regarding blood pressure, blood sugar, body temperature, blood oxygen, and other health-related information will be connected and transmitted through the cloud to remote health care system for the medical Mechatronics Lab to integrate and analyze these multidimensional health information. Subsequently, the remote health care center at the Kaohsiung Medical University Chung-Ho Memorial Hospital will provide smart health management services tailored to individual users, allowing users to enjoy smart care services provided by the smart life and professional medical center team. It is also possible to relay health status and information of relevant incidents to family members.

## Outstanding Venture Award for Smart Color-Changing Windows

The color of the windows can be changed at any time through the remote control of a mobile app. Lin Tsung-Hsien, a distinguished professor in the Department of Photoelectronics, teamed up with the Liquid Crystal Photonics Lab students and spent more than a year to



## 神農信仰文化誌出版 書寫青雲宮 300 年歷史

本校中文系首件產學合作計畫，與高雄大社青雲宮合作，由本校中文系助理教授羅景文與中央大學中文系助理教授鄭芳祥共同編纂《高雄大社青雲宮神農信仰文化誌》，自 2014 至 2018 年這 4 年多的田野調查、記錄與撰寫，為青雲宮留下完整歷史沿革與文化紀錄，並於 2018 年 6 月正式出版。為求信仰面貌與文化活動的完整性，本書分別描述青雲宮的創建發展、信仰神祇、建築藝術、信仰活動、分靈廟宇、靈驗事蹟、人事組織、公益文化活動、兩岸交流等面向，詳實記錄大社青雲宮各階段多元發展的軌跡，同時，也藉由廟誌編纂，提供學界研究神農信仰文化的史料素材。

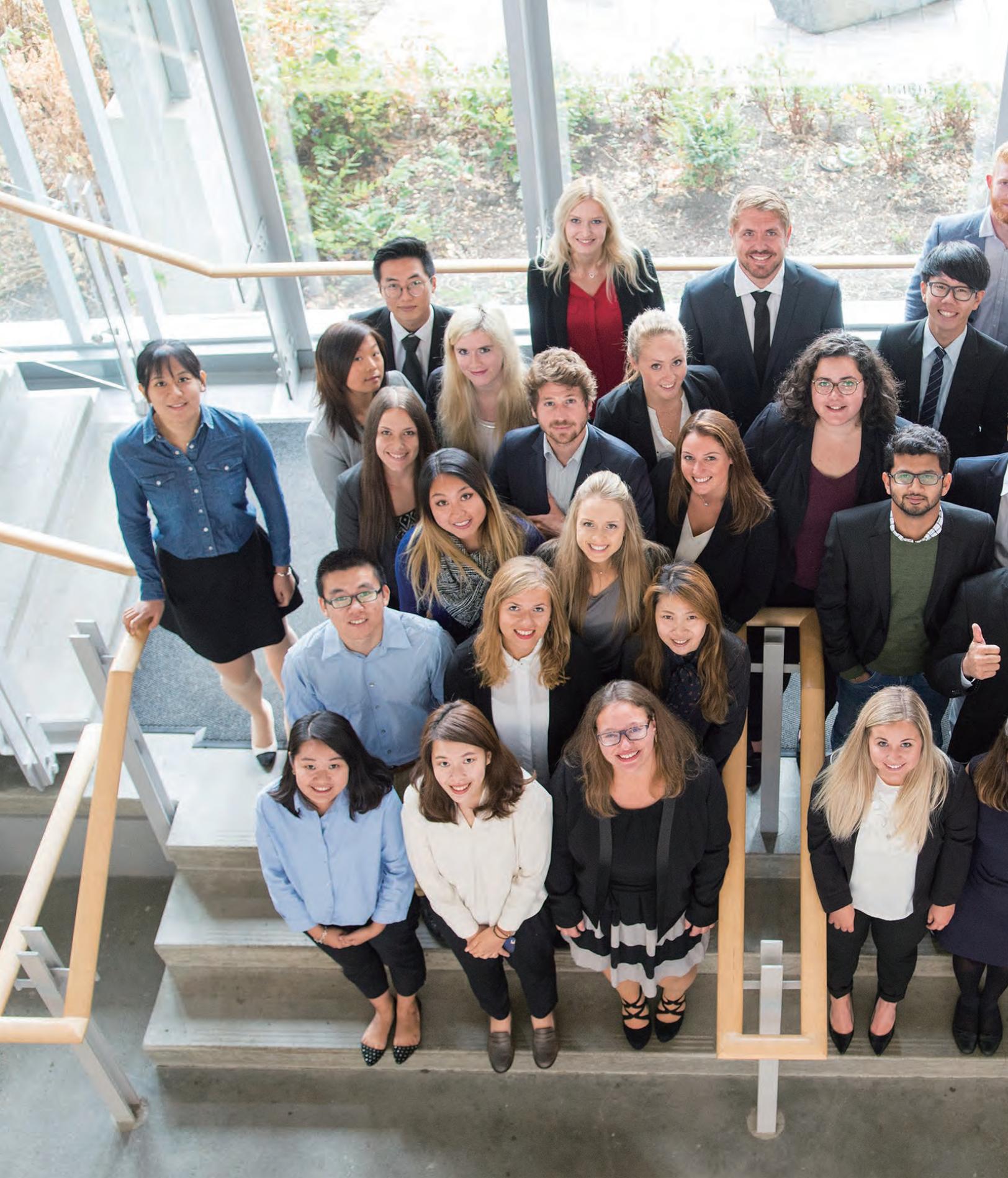
develop a film that could attach to the glass. Through the mobile app, a touch on the screen of the phone can alternate the glass between blurred, light, and dark colors as well as convert it into a projector at any time. In the future, the film could be applied to vehicles and commercial buildings. This innovative invention was distinctive among the 166 enlistments from new team members and won the Outstanding Venture Award from the Ministry of Science and Technology, with a prize valued at NT\$2 million. This product can be used in a variety of situations. In vehicles for example, the glass can be switched to a heat-insulating state during the day to block the glare of light and heat, and to a transparent state in the evening to provide a clear view while driving. When applied to architectural glass, users can actively control the light flux inside the room, and switch to a state of black fog at night to ensure privacy. The multifunctional smart window can be used with projection equipment to present high-quality images on the glass, thus improving the experience of augmented reality.

## A Book on the 300-year History of the Qingyun Temple

For the first time, the Department of Chinese Literature conducted an industry–university cooperation plan in conjunction with Kaohsiung Dashe Qingyun Temple. Luo Ching-Wen, assistant professor in the Department of Chinese Literature, and Cheng Fang-Hsiang, assistant professor in the Department of Chinese Literature in National Central University, coedited a

book entitled Kaohsiung Dashe Chingyun Temple and the Culture of Shennong Belief. After four years of field investigation, recording, and writing from 2014 to 2018, the resulting book officially published in June, 2018 was a comprehensive account of the historical evolution and cultural background of the Qingyun Temple. To investigate the integrity of the worship and cultural activities, the book includes descriptions on such topics as the creation and development of the Qingyun Temple, belief in gods, architectural art, worship activities, bunrei temples, spiritual deeds, personnel organizations, philanthropic and cultural activities, and cross-strait exchanges. The book offers both a record of the trajectory at each stage of the diverse development of the Dashe Qingyun Temple as well as historical material for studying the culture of Shennong belief.





# NSYSU



# 全球視野

## Global Connections



過去一年本校持續拓展國際合作交流，目前共有 219 所姊妹校，包括亞洲 119 校、歐洲 73 校、美洲 23 校、大洋洲 4 校，分布於 40 個國家，其中 169 所簽有交換學生協議，提供學生出國交換研修機會，另 50 所為一般性合作備忘錄，希望擴大並深化彼此學術合作。

配合政府新南向政策，中山大學積極推動與東南亞及南亞國家合作交流，在新南向計畫經費補助下，特別針對菲律賓、泰國及斯里蘭卡 3 國進行拓點招生，希望開拓這 3 國學生來校就讀。另一方面，本校也選送超過 30 名學生赴泰國、緬甸及印度短期見習及實習。此外，透過雙邊的學術研討會與交流互訪，更強化了學校間的交流合作，如理學院與泰國馬希敦大學附設醫院簽署了博士雙聯學位協議，將共同培養研究人才。

Internationalization is a continuous focus of NSYSU and there are currently 219 sister universities, including 119 in Asia, 73 in Europe, 23 in America and 4 in Oceania spreading across 40 countries. Among them, NSYSU has signed agreements with 169 universities providing exchange and study abroad opportunities. Moreover, there are 50 academic MOUs for broader and deeper cooperation in various academic fields.

In line with the New Southbound Initiative of the government, NSYSU has been actively promoting cooperation and exchange with South and Southeast Asian countries. Funded by government grants, the University has led delegations to the Philippines, Thailand and Sri Lanka for student recruitment and provide for more than 30 students to Thailand, Myanmar, and India for short-term internships. Through bilateral seminars and visits, academic links are strengthened where the College of Science of NSYSU and Mahidol University Hospital in Thailand signed a doctoral double-degree agreement to jointly nurture research talents.



中山大學致力於提升世界級的學術競爭力，106 學年度也進行重要的學術出訪，如訪問比利時魯汶大學及根特大學、法國艾克斯馬賽大學及馬賽中央理工學院、斯里蘭卡佩拉德尼亞大學、魯胡納大學及斯里賈亞瓦德納普拉大學等，與各校建立更緊密的合作關係。舉辦多場國際研討會，擴大在國際學術界上的參與及影響力。包括本校首度與日本國立研究開發法人物質材料研究機構合作舉辦「台日雙邊材料科學研討會暨策略材料國際研究中心工作坊」，交流材料科學的發展趨勢與應用，並探討未來雙邊合作的目標與方向。公共事務管理研究所舉辦「大學社會責任論壇」，透過國際重量級學者與國內大學社會責任參與者的精彩對話，進一步釐清我國推動大學社會責任的策略方向。此外，2015 年諾貝爾和平獎得主「突尼西亞全國四方對話」代表、前「突尼西亞人權協會」副主席梅沙德德荷穆達尼，受邀抵台交流，以「沒有社會正義的民主，可能嗎？」為題，蒞校分享第三世界的公民社會經驗。

NSYSU has continue to quest for academic excellence through international academic exchanges. Important visits during 2017-18 Academic year included to KU Leuven and Ghent University in Belgium, Aix-Marseille University and École Centrale de Marseille in France, University of Peradeniya, University of Ruhuna and University of Sri Jayewardenpura in Sri Lanka, for deeper research cooperation. Back on campus, NSYSU and the National Institute for Materials Science (NIMS) of Japan co-organized the first Taiwan-Japan Bilateral Materials Science Conference & SMART Center Workshop to exchange ideas on the developmental trend and application of material science as well as develop common goals for collaboration. Also, the Institute of Public Affairs Management hosted the University Social Responsibility (USR) Forum with renowned scholars focusing on strategy for universities in Taiwan to implement university social responsibilities. On the humanities aspect, NSYSU welcomed Mr. Messauoud Romdhani, Vice President of the Tunisia Human Rights League (TLHR) and member of the Tunisian Quartet, to share his experience in a talk entitled "Is It Possible for a Democracy to be without Social Justice?"





### 邀六國學者 探討新南向城市鏈結

東南亞研究中心與高雄市政府經濟發展局共同舉辦「新南向：城市合作與共創公共財」國際研討會，邀集台灣及菲律賓、越南、泰國、新加坡、馬來西亞、印尼等國專家學者，深入交流從城市合作鏈結、共創公共財等議題，探討在農業、醫療、經濟特區與城市治理等關鍵議題上，台灣與東南亞各國間雙贏的可能性。

### 前進菲律賓設點 促進教育經貿交流

本校承接教育部新南向人才培育推動計畫，2017年9月29日於馬尼拉正式成立「菲律賓臺灣教育中心」及「菲律賓經貿產學資源中心」並舉行聯合辦公室開幕揭牌儀式。兩中心協力合作，形成縝密的資源網絡，發揮綜效，協助國內大專校院開拓雙邊實質教育交流，深化互動關係，扮演促進台菲經貿產學與人才培育雙邊合作重要窗口。



### Scholars from Six Countries Explore New Southbound Urban Connection

The Center for Southeast Asian Studies at NSYSU jointly hosted the international symposium, Deepening the Partnership of Sustainable Development: Fostering Regional Municipal Networks and Public Goods, with the Economic Development Bureau of Kaohsiung City Government. Experts and scholars from the Philippines, Vietnam, Thailand, Singapore, Malaysia, and Indonesia together with those from Taiwan gathered in Kaohsiung to discuss cooperation among cities, creation of public goods, and issues concerning agriculture, medical care, special economic zones, and urban governance in search for win-win solution.

### Forward to the Philippines to Enhance Educational and Economic Ties

NSYSU established the "Taiwan Education Center-Philippines (TEC-Philippines)" and the "Resource Center for Economics, Industry and Academy Cooperation, NSYSU (RCEIAC)" as part of the New Southbound Talent Development Program funded by the Ministry of Education. The joint office of the two centers officially launched and began operation on September 29 of 2017. The Joint Office act as a contact window to expand on bilateral academic exchanges and increase cooperation for nurturing of talents on both sides.



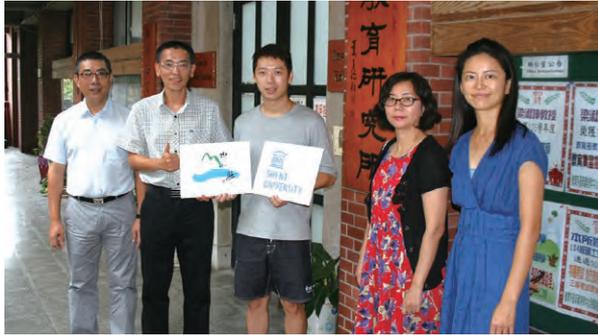
### 推動新南向招生與學術交流

在國際招生方面，電機系、通訊所、生物系與印尼布勞爪哇大學合作的 1+1 碩士雙聯學位，已有雙聯學位碩士生畢業後留下來繼續攻讀博士班。國際處參加印尼、馬來西亞、菲律賓、日本等台灣高等教育展，擴大招收外籍學生來校就讀，亦針對商管、電機、通訊、亞太研究等全英文學程加強招生宣導。管理學院及理學院則首度組成跨系所團隊前進泰國大學招生。管院教師並帶領學生至泰國學校參加量身打造課程研討及企業參訪，讓台灣學生深度了解泰國及東協國家文化、商業環境與未來發展。

### Southbound Recruitment and Academic Exchanges

The Department of Electrical Engineering with the Institute of Communications Engineering and the Department of Biological Sciences have signed a Master Double-degree agreement with the University of Brawijaya from Indonesia to encourage further pursuit of Ph.D. degree as many of the double-degree master graduates have. Meanwhile, the Office of International Affairs have actively participated in the Study in Taiwan education exhibitions in Indonesia, Malaysia, the Philippines, and Japan to over the years to introduce the all-English programs in Management, Electrical Engineering, Communications Engineering, and Asia-Pacific studies. For the first time in 2018, the College of Management and the College of Science jointly formed a delegation to visit universities in Thailand. In addition, the College of Management organized faculty-led program to take students for lectures and company visits abroad in Thailand to gain understanding of business environment, culture and future development trends.





### 攜手比利時根特大學 簽訂雙聯博士學位

教育研究所與比利時根特大學教育研究學系簽訂跨國雙聯博士學位，由兩校教授共同指導，拓展國際視野，汲取國際研究經驗與知能的機會，為自身學術生涯發展增值。博士生於中山大學就讀兩年後，再赴根特大學一至兩年，並完成相關畢業條件及博士論文口試，最快四年可獲得雙博士學位。教育所宋宥賢獲選為首位修讀中山與根特大學雙聯博士學位的博士生，於 2017 年 9 月赴比利時學習研究。

### 華語中心 20 週年 推廣台灣文化

華語中心以推廣華語文教育為宗旨，2017 年成立屆滿 20 週年，每年約有 440 名學員，來自世界各地 45 個國家，前來修習華語課程。中心也開設華語師資班，培訓專業之華語師資，推廣海內外對外華語教學。華語中心以特色活動與文化課程，受到外籍學生的好評，例如一年一度的外國人華台語歌唱大賽，活動盛大受到很多外國學生的歡迎與參與。在一般課程之外，中心也設計走動式華語教學，舉辦一日農夫文化體驗活動，安排外籍學生至旗山、大樹、美濃等地深度體驗農家生活。提高外籍學生對學習中文及台灣文化的興趣，也同時推廣高雄農村的特色觀光。



### NSYSU Signed an Agreement for a Joint Ph.D. with the University of Ghent in Belgium

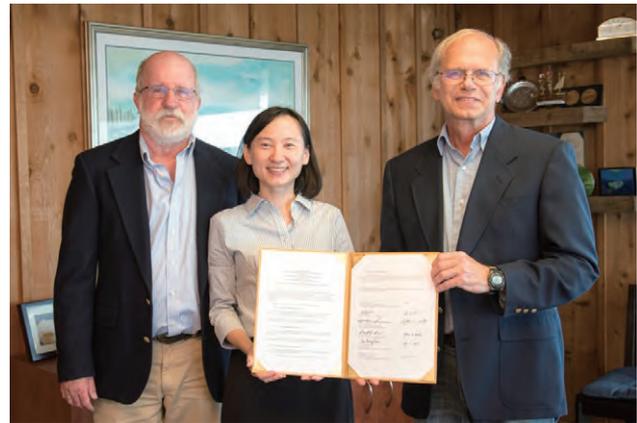
The Institute of Education and the Department of Educational Research at the University of Ghent in Belgium signed a contract to offer an international joint doctoral program, providing doctoral students with the joint supervision of two advisors from two universities. This is an excellent chance for doctoral students to expand their global horizons and draw on their international research experience and knowledge to add value to their academic careers. After two years of study at NSYSU, doctoral students may go to Ghent University for one or two years and complete the relevant graduation requirements as well as their dissertation oral defense. In four years, students can obtain a joint Ph.D. degree. Sung Yu-hsien, a Ph.D. student at the Institute of Education, was the first doctoral student in the joint Ph.D. program. He went to Belgium to study in September 2017.

### The Chinese Language Center Celebrating its 20th Anniversary in Promoting Taiwanese Culture

The Chinese Language Center (CLC) celebrates its 20th anniversary in 2017 of dedication in promoting Chinese language learning. CLC annually receive approximately 440 students from 45 countries to learn Chinese, and the Center also offers teacher training programs to promote Chinese language teaching in Taiwan and abroad. The programs at CLC is highly regarded by international students for its cultural course and featured activities such as the Singing Contest in Mandarin and Taiwanese. In addition to regular course in the class room, the CLC also design experience courses for students to learn about farming in nearby communities of Qi-shan, Da-shu and Mei-nong. Through the interactive activities, international students learn about both the Chinese language and Taiwanese culture and about the communities around Kaohsiung.

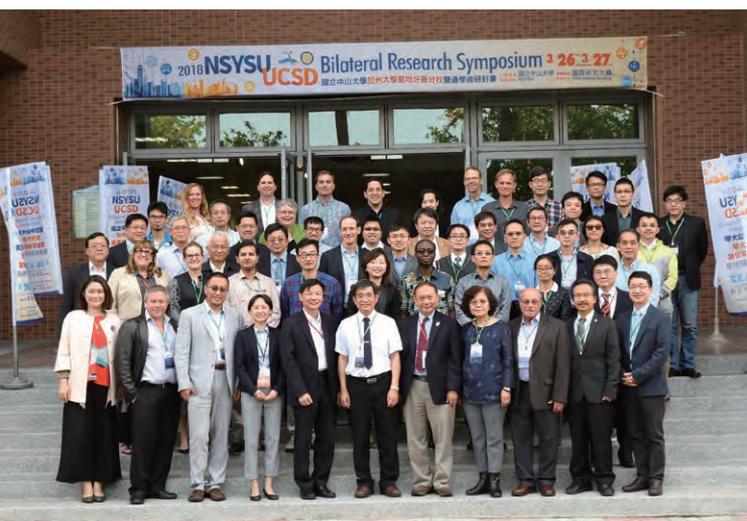
## 深化國際夥伴學校合作

本校與美國加州大學聖地牙哥分校（簡稱UCSD）Scripps 海洋研究所捷運工程局，及國立海洋生物博物館簽署合作備忘錄，共同宣布投入海洋生物多樣性、珊瑚與其共生藻的關係、珊瑚礁物種繁殖與養殖，及海洋天然物的開發等四項重點研究，進行跨國規模的學術合作，期待三方合作後資源共享，提升彼此海洋研究的寬廣度與深度。與 UCSD 雙邊學術交流近 10 年，第五屆雙邊學術研討會在本校舉行，主軸聚焦智慧城市，邀集請高雄市政府捷運工程局、國立海洋生物博物館、成功大學、高雄醫學大學等相關學者共同參與。除光電材料、海洋科學及社會科學等兩校強項，並首度擴大延伸智慧城市、氣膠科學及生醫科學等領域，期能激發跨校及跨域合作，凸顯本校南方智庫角色，達成大學城市共同願景。



## Strengthening Cooperation between International Partner Schools

NSYSU signed a memorandum of cooperation with the Scripps Institution of Oceanography at the University of California, San Diego and with the National Museum of Marine Biology and Aquarium, Taiwan. They jointly announced four key studies, namely on marine biodiversity, the relationship between coral and their symbiotic algae, the cultivation of coral reef species, and the development of natural marine products. They orchestrated interdisciplinary academic cooperation, expecting to share the accumulated resources obtained through the tripartite cooperation for the purpose of enhancing the breadth and depth of ocean research. NSYSU has participated in bilateral academic exchange with UCSD for almost 10 years. The 5th bilateral symposium will be held in NSYSU. The main focus will be smart cities; we have invited officials from the Mass Rapid Transit Bureau, Kaohsiung City, as well as scholars from the National Museum of Marine Biology and Aquarium, National Cheng Kung University, and Kaohsiung Medical University. In addition to the strengths of the two schools, such as optoelectronic materials, marine science, and social sciences, we have expanded to other fields for the first time, such as smart cities, aerosol science, and biomedical science in the hope of stimulating cross-school and interdisciplinary cooperation, highlighting the role of NSYSU as a think tank in southern Taiwan and achieving a shared vision of a university town.







# 拓展與 區域連結

## Outreach and Regional Alliances



本校持續深化作為頂尖大學與南方智庫之角色，以孕育人才為本，進而豐沛教研能量，與國家社會同脈共振，與地方創生共榮，開放式無邊界大學為頂尖大學社會責任展現，持續強化產官學研的合作，成為帶動國家社會整體發展的引擎，並透過城市連結、產學合作、專業服務學習課程、大學社會責任實踐等方案，帶領學生走出校園，深化人文關懷。

### 南向領航 大馬培訓企業高階經理人

首次開辦「馬來西亞企業人才培訓班」，鄭英耀校長強調，台灣正積極推動新南向政策，此次至馬來西亞開辦企業培訓課程意義重大，不僅為本校首次跨出台灣開辦企業人才培訓課程，在新南向政策的具體實踐上，也跨出深具代表性的一大步。

National Sun Yat-Sen University (NSYSU) continues to strengthen its role as a top university and a think tank in southern Taiwan. It is focused on cultivating talent, enriching the teaching and research capacity, resonating with the nation and the society, and sharing prosperity with the local communities. Open universities without borders showcase the social responsibility of top universities. Strong cooperation between industry, government, academia, and research institutes

has become the driving force behind the overall development of the nation and the society. Through the links between cities, industry–university cooperation, professional service learning courses, and university social-responsibility practices, NSYSU leads its students to leave the university to demonstrate their deepened compassion for the society.

### Southbound Pioneer: Seniorenterprise Managers Training in Malaysia

First Enterprise Talent Training Course was held in Malaysia. The president of NSYSU, Cheng Ying-Yao, emphasized that Taiwan had been actively promoting the New Southbound Policy. The founding of this corporate training course in Malaysia was significant not only because it was the first time that NSYSU offered a corporate talent training course outside of Taiwan, but also because it represented a monumental step forward on practicing the New Southbound Policy.





## Sizihwan Fringe Festival Collaborating with EcoMobility 2017

The 2017 NSYSU Annual Art event, which was collaborated with the Kaohsiung City Government, organized the Sizihwan Fringe Festival. This was the first time NSYSU held an outdoor public performance at Hamaxing area, collaborating together with local top performing teams. This event invited guests such as the outstanding Paper Windmill Troupe and the Ju Percussion Group. The city government provided a full support to this festival, making the community celebration a complete success.

## 100-Year-Old Military Tunnel Unveiled: Re-imagining the Space for Theater Production and Exhibitions

In the Sizihwan Tunnel in NSYSU, a Japanese colonial era military base that had been concealed for approximately 100 years was publicly unveiled on November 11, 2017. In conjunction NSYSU's "Re-shaping Identities of Marginal Communities" project sponsored by Ministry of Education's Humanity, Field, and Co-creation project, several activities, such as the "Travel through Time in the Mysterious Tunnel" exhibition, the immersive theater production "Wander", the "Remember Fukushima and Conserve Energy" activity, and the "Fukushima's Shouts and Whispers" photography exhibition, were hosted in the tunnel to reveal its mystery.

### 西灣藝穗節攜手生態交通盛典 封街走讀哈瑪星

本校年度盛事藝術季與高雄市政府攜手辦理「西灣藝穗節」，首度將室內展演移至哈瑪星區域公開演出，更有頂尖團隊走入社區，戶外匯演邀請台灣首屈一指的紙風車劇團、朱宗慶打擊樂團等，在臨海一路封街與社區同歡。

### 防空洞看戲看展看熱鬧 藏身百年軍用秘道首公開

本校西子灣隧道中，隱藏近百年的日治時代神秘軍事基地首度公開亮相。配合 HFCC「邊緣社區、認同再造」計畫，利用隧道地形陸續舉辦活動，例如「隧道秘境穿越時空」、沉浸式劇場《遊》、「勿忘福島·能源事急」活動、「福島的吶喊和低語」攝影展等，揭開隧道神秘面紗。



## 廢棄玩具變藝術 師生辦打狗舊港文化祭

家裡不要的二手或廢棄玩具，經過學童一番巧手創作，居然變身藝術品。本校師生於高雄駁二M zone 大港自造特區舉辦「打狗舊港文化祭—共享生活節」活動，開幕式上，學生與社會企業於忠孝國小設立的「玩具圖書館」合作，帶領小朋友運用創意與创客技巧，重新打造大批被捐獻出、不再被使用的玩具，讓廢棄玩具成為獨一無二的藝術創作。



## 空品教育推廣扎根 氣膠中心扮演關鍵推手

PM2.5 細懸浮微粒被稱為「空氣中的隱形殺手」，是目前全球共同面臨並關注的重大議題。有感於空氣污染與懸浮其中之 PM2.5 細懸浮微粒對於環境生態及社會大眾健康危害之迫切性，讓更多社會大眾了解相關資訊以共同努力提升環境品質並守護自身健康可謂迫在眉睫。因此，本校氣膠科學研究中心規劃了「撥霾見日·PM2.5 視界」展覽讓社會大眾對 PM2.5 議題有更深入的认识，並從自身觀念及行為的改變開始。為了培育下一代學子正確的空汙防治知識，氣膠科學研究中心更與高雄市政府教育局攜手，舉辦高雄市 K-12 各級學習階段之空品品質教育種子教師培訓研習，期望將空品環境保護的知識扎根校園。

## Turning Abandoned Toys into Creative Artworks. Teachers and Students Organizing the Takow Old Port Cultural Festival

Second-hand or abandoned toys that were no longer wanted at home were transformed into creative artworks by students. NSYSU teachers and students held the Takow Old Port Cultural Festival—AMaze Our Lifestyle event in the Mzone area of the Pier-2 Art Center in Kaohsiung. At the opening ceremony, students and social enterprises collaborated with the Toy Library set up by Chung Hsiao Elementary School to encourage children to be makers and use creative techniques to give new life to the large number of toys that had been donated and no longer used, thus transforming abandoned toys into unique artistic creations.

## Educational Outreach of Air Quality and Environmental Protection and the Crucial Role of the Aerosol Science Research Center

PM2.5, ultrafine particulate matters are known as the "invisible killer in the air". They have been a major issue and concern the whole globe is currently facing. Due to the increasingly severe impacts of air pollution and PM2.5 to the environmental ecosystem and to the human health, there is an urgent need to raise the awareness of the public regarding this issue. With this concern, Aerosol Science Research Center of National Sun Yat-Sen University has curated the special themed exhibition, "From Haze to Helios: PM2.5 Visual World", with an ultimate goal to help the public gaining more understanding of PM2.5 and its relevant issues, and by doing do, to call forth a collective effort from everyone to protect our environment and safeguard our own health.





### 校園首創原創音樂劇 《大海的女兒》重現旗津榮景

本校首度自製原創音樂劇《大海的女兒》跨領域結合音樂學系的創作與音樂展演、社會學系的社會調查與故事採集及劇場藝術學系的戲劇表演與劇場技術。從劇本、音樂創作、舞台上的各項設計等皆為師生自創，演員和樂手則由學生擔綱，是一齣結合教學，研究與實作的原創音樂劇。

### 翻轉 NG 蔬果 丑果食物銀行送暖推續食

社科院師生落實大學社會責任，結合鄰近區域旗津、鼓山、鹽埕的熱心公益人士，與鼓山慈仁宮共同籌組「丑果食物銀行」。以醜蔬果為主、民生物資為輔，協助區域內清寒及弱勢家庭能免於飢餓。此外，學生也到鄰近學校宣導與倡議剩食分享的相關善念與公益，讓食物不浪費的種子向下扎根。

To establish accurate knowledge of air pollution prevention for the young generation, the Aerosol Science Research Center has collaborated with the Education Bureau, Kaohsiung City Government to host a series of air-quality educational training workshops for seed teachers at all educational levels ranging from K–12 grades in Kaohsiung City, with a goal to pass the essential knowledge of air quality and environmental protection to all campus.

### The Original Musical "The Daughter of the Sea" Enacting the Prosperous Seaside Scenery of Cijin

NSYSU's first original musical, "The Daughter of the Sea", combines compositions and music performance by the Department of Music, social survey and story collection by the Department of Sociology, and the theater performance and techniques of the Department of Theater Arts. The script, music, and all stage designs were created by teachers and students of NSYSU. The actors and musicians were also students. It is an original musical that combines teaching, research, and practice.

### Inglorious Fruits and Vegetables Food Bank Established to Promote Salvage Food

The teachers and students of the College of Social Sciences implemented the social responsibility of the university and collaborated with the public interest people living in the neighboring areas of Cijin, Gushan, and Yancheng to found an "Inglorious Fruits and Vegetables Food Bank" together with Gushan Ciren Temple. By focusing on inglorious fruits and vegetables and being supplemented by civilian resources, such a food bank helps low-income families in the region to overcome hunger. Additionally, students also go to neighboring schools



## 前進教學場域 公事所推在地創生

公共事務管理研究所積極與在地社區聯結，並落實大學社會責任，辦理一連串農村創生課程，如「森里川農村創新計畫」助大武族人重現柴舉柴燒；與旗山區大林社區共同舉辦「檸檬的夏天－青年啟蒙世代農村體驗營」，帶領大學生走進農村展開城鄉交流；也至旗山區圓富社區進行個案實境教學，或舉辦公共事務提案競賽，開啟世代創意激盪。

## 舊社區新活力 樂遊鹽埕直播在地生活

劇場藝術學系「展演製作與策劃」課程讓學生親自策劃、製作與執行展演，劇藝系碩士班7名學生創立「遊吧鹽埕」Facebook 粉絲專頁，以「直播」方式打破文字、圖像的距離，透過直播立即性與觀眾互動，呈現「食衣住行育樂」六大在地生活，精選6間特色店家，帶領觀眾穿梭鹽埕區，讓舊街道注入新活力。

to promote goodwill and charity with the initiative of sharing salvaged food and leftovers to spread the idea that food should not be wasted.

## Entering the Realm of Teaching to Promote Local Participation in Public Affairs

The Institute of Public Affairs Management actively creates links with local communities and implements university social responsibility practices by offering a series of rural revitalization courses. For example, the Satoyama Rural Innovation Project helped the Taoivan people revive the practices of firewood collection and burning. Collaborating with the Dalin Community in Cishan District, the Institute held a rural experience camp, the Summer of Lemon, bringing university students to experience rural culture and advance urban-rural exchange. Teachers and students also visited the Yuanfu Community in Cishan District to conduct on-site case studies or hold a public-affairs proposal contest to promote brainstorming in the young generation.

## Bringing New Vitality in the Old Community Through Live Broadcasting the Life in Yancheng

The Producing Performing Arts course in the Department of Theater Arts allows students to personally plan, produce, and execute performances. Seven students from the MA curriculum in the Department of Theater Arts created the Facebook page of "Touring Yancheng." The students implemented the function of live broadcasting on this page so that the visitors' encounters with the community are not limited to the mediation of written text and images. Through this function, they can interact with the audience in real time and the audience and have a face to face understanding of the six main aspects of local culture, cuisine, clothing, housing, transportation, education, and entertainment. Furthermore, the students selected six representative stores, leading the audience through Yancheng District to infuse the old streets with new energy.



## 教學童永續城鄉 社企中心打造大平台

社會企業發展研究中心、日月光文教基金會及高雄市政府教育局舉辦「高雄市高國中小學永續城鄉展覽」，本校深入高雄 16 個行政區、21 所學校，將大學能量導入在地學校，協助師生及居民推動永續產業發展，期能媒合企業共同改善當地教育環境、振興社區經濟產業發展及促進青年返鄉。



## Educating Children on Sustainable Development in Urban and Rural Areas. The Center on Social Enterprise Development and Research Plays the Role of a SDG Platform.

The Center on Social Enterprise Development and Research, NSYSU (the Center), the ASE Cultural and Educational Foundation, and the Education Bureau, Kaohsiung City Government, together hosted the Kaohsiung High Schools, Junior High Schools, and Elementary Schools (the Schools) Sustainable Urban and Rural Development Exhibition. The Center has become involved in 16 administrative districts and 21 Schools in Kaohsiung, utilizing the university-level capacity into matching teachers and students from local schools and residents from local organizations to jointly participate in sustainable community development. The goal is to integrate enterprise resources with local development needs to revitalize the economy and industrial growth and make possible return of the young workforce.



# 徵薪挺你-校友企業博覽會

校友企業品牌行銷攤位及徵才攤位 理工長廊及管院長廊

想進校友企業工作嗎？想看看中山有那些校友企業嗎？理工及管院長廊

中山人的大平台(含學生及校友表演，以及活動剪綵) 行政大樓前

畢業典禮 校友及 當然不能 讓我們 於中山人的大平台

經典論壇 UIC 職涯 活力新 有自 院2037演講廳

學長學姊傳授

法

來美好康莊大

和

徵薪挺你  
中山



# NSYSU

# 覽會暨徵才

館等你來探索及挖寶！

廣場

台表演，歡送今年的畢業生！

德

受您獨門心

大道上。



校友總會、中山大學校友

師培中心校友會、中山大

廣教育處、中山大學圖

贊助校友企業、

系、所校友會及校

## 校友貢獻

## Alumni Contributions

國立中山大學「校友服務中心」自2014年成立以來，以強化校友服務、串聯校友網路，建立與學校間的橋樑為目標，持續以「中山人、一家人」的精神凝聚校友向心力。透過與「國立中山大學校友總會」的緊密合作，各地區校友會陸續成立。在生物科學系校友、100學年度傑出校友洪敏榮的積極推動下，屏東縣校友會於2016年11月成立。新竹地區有多達兩、三千位校友，新竹市校友會於2018年3月成立，由機電系校友何展出任第一屆理事長。加上2017年2月成立的香港校友會，目前共有7個地區校友會及3個海外校友會，為海內外各地校友串起連結平台。

### 106 學年度傑出校友 (2017-2018)

國立中山大學慶祝37週年校慶，2017年11月11日舉行傑出校友頒獎典禮，106學年度共有9位獲獎人，在學術、工商、社會服務、文化藝術等專業領域，表現傑出並對國家社會貢獻卓著。今年特別增設國外傑出校友獎，頒發給社會科學院中國與亞太區域研究所（前大陸研究所）博士班校友孟嘉莉女士。

Since its inception in 2014, the National Sun Yat-sen University (NSYSU) Alumni Service Center has been strengthening its alumni service, assisting alumni networking, and serving as the bridge between alumni and NSYSU. It continues to unite its alumni in the spirit of "Here at NSYSU, we are family". Through close cooperation with the NSYSU Alumni Association, alumni associations in various regions have been established. The Pingtung County Alumni Association was established in November 2016 through active promotion by Dr. Hung Min-Rong, an outstanding 2011 alumnus of Department of Biology. In the Hsinchu area, as many as 2,000 or 3,000 alumni also established the Hsinchu City Alumni Association in March 2018, with alumnus Johnny Ho of the Department of Mechanical Engineering as the first chairman of the board. In combination with the Hong Kong Alumni Association, which was established in February 2017, 7 regional alumni associations and 3 overseas alumni associations currently exist, linking platforms for alumni domestically and abroad.

### Distinguished Alumni (2017–2018)

Celebrating the 37th Anniversary Celebration, NSYSU held the Outstanding Alumni Awards Ceremony on November 11, 2017. Nine winners were selected for the 2017-18 academic year who had performed exceptionally in the fields of academics, business, social services, and culture and art and had made outstanding contributions to the national society. This year, a Distinguished Overseas Alumni award was added and given to Ms. Gloria Jumamil-Mercado, a Ph.D. alumna of the Institute of China and Asia-Pacific Studies (formerly known as Graduate Institute of Mainland China Studies) in the College of Social Sciences.



## 106 學年度傑出校友 (2017-2018)

姓名 Name	畢業系別及年度 Graduation Department/Institute	學當選類別 Award Categories
黃衍介 Yen-Chieh Huang	電機工程學系學士班 Department of Electrical Engineering, BS, 1986	學術卓越
黃條來 Tiao-Kai Huang	海洋資源學系學士班 Department of Marine Biotechnology and Resources, BS, 1986	學術卓越
張德盛 Te-Sheng Chang	管理學院高階經營碩士學程在職專班 (EMBA) Executive Master in Business Administration (EMBA), MBA, 1999	工商菁英
鄭竹明 Chu- Ming Cheng	物理學系學士班 Department of Physics, BS, 1994	工商菁英
蔡煜麒 Yi-Chi Tsai	管理學院高階經營碩士學程在職專班 (EMBA) Executive Master in Business Administration (EMBA), MBA, 2001	社會服務
周光宙 Kuang-Cho Chou	管理學院高階經營碩士學程在職專班 (EMBA) Executive Master in Business Administration (EMBA), MBA, 2000	社會服務
金星 Chin Hsing	外國語文學系學士班 Department of Foreign Language and Literature, BA, 1984	文化藝術
白雅玲 Ya-Ling Pai	社會科學院高階公共政策碩士學程在職專班 (EMPP) Executive Master of Public Policy Program (EMPP), MPP, 2011	文化藝術
孟嘉莉 Gloria Jumamil-Mercado	中國與亞太區域研究所 (前大陸研究所) 博士班 Institute of China and Asia-Pacific Studies (Formerly Institute of Mainland China Studies), Ph.D., 2007	國外傑出校友

## 國際傑出校友 受邀談菲台務實外交

榮獲 106 學年度國外傑出校友獎的孟嘉莉女士，現任菲律賓總統府內閣祕書處副祕書長，她獲邀以「一中政策下的菲台關係」為題蒞校演講。孟嘉莉女士為社會科學院中國與亞太區域研究所（前大陸研究所）博士班 96 級校友，也是大陸所第一位取得博士學位的國際學生。她在演講中指出，超過 12 萬的菲律賓移工在台工作，台灣是菲律賓重要的外交夥伴，雙方必須就投資保障、移工人權、高教協議等議題持續建立實質合作模式。

## Internationally Distinguished Alumni were Invited to Discuss Pragmatic Diplomatic Issues between Taiwan and the Philippines

Ms. Gloria Jumamil-Mercado, who won the 2017 Distinguished Overseas Alumni award, is currently the Undersecretary and Executive Director, Office of the Cabinet Secretary, Office of the President, Republic of the Philippines. She was invited to deliver a speech on the topic of "Philippines-Taiwan Relations under the One-China Policy". Ms. Gloria Jumamil-Mercado is a 2007 Ph.D. alumna from the Institute of China and Asia-Pacific Studies (formerly known as China Studies) in the College of Social Sciences and the first international student who obtained a Ph.D in this institute. In her speech, she pointed out the presence of more than 120,000 Philippine migrant workers in Taiwan. Taiwan is a crucial diplomatic partner with the Philippines. Both sides must continue to establish a substantive model of cooperation based on investment security, migrant human rights, and higher-education agreements.



## 中山大學台南校友會 訪菲探索新商機

台南校友會理事長陳素蓁率領 20 多名企業界主管級校友，組成「菲律賓企業參訪團」，訪問馬尼拉、宿霧等城市。此行參觀菲律賓台商總會總會長江福龍經營的穩贏科技公司，及拜訪僑務諮詢委員丁金煌的 KOTEN 公司總部，聽取優秀台商分享成功經驗並擴充人脈外，也進一步瞭解菲國，探索投資及商業機會。

## The Tainan Alumni Association Visits the Philippines to Explore New Business Opportunities

Karen Chen, chairman of the Tainan Alumni Association, led more than 20 alumni, now senior executives, to form a business delegation to visit cities such as Manila and Cebu. They visited both Purewin, a technology company operated by Fu Long Chiang, the president of the Taiwanese Association Inc. in the Philippines, as well as the headquarters of KOTEN of Chin-huang Ting, a senior adviser of the Overseas Community Affairs Council. They listened to outstanding Taiwanese businessmen sharing their successful experiences and methods for expanding their connections and further exploring investment and business opportunities in the Philippines.



### 中山攜手悠遊卡 西灣圓夢作公益

本校與悠遊卡公司合作，2018年2月正式發行悠遊卡校友證—「西灣圓夢認同悠遊卡\*校友證」，校友可免費申辦，並享有校內及特約商店優惠，若刷卡消費則提撥回饋作為清寒獎助學金，是全國第一張公益回饋清寒生的悠遊卡校友證。此外，悠遊卡公司也響應「西灣圓夢助學金」計畫，106學年度捐2名弱勢新生共計20萬元西灣圓夢獎學金。

### 中山校友分享新創經驗 前進新南向

教育部青年發展署精選26家參與「U-start大專畢業生創業服務計畫」的台灣新創公司，由中山大學產學處帶領，前往泰國及印尼交流。其中「點子行動科技」及「貼個夠股份有限公司」兩家新創公司是由中山校友組成、中山大學育成中心培育創立。點子行動科技主打「手機醫生」APP檢測手機的健康程度，此行收獲將作為前進印尼市場的參考，並調整營運方向。「貼個夠有限公司」則是開發二手手機回售系統，此行與當地最大的手機配件商建立關係，進一步了解南向國家手機使用的偏好，對公司未來的產品開發有莫大助益。

### NSYSU Cooperates with EasyCard Corp.

In cooperation with EasyCard Corp., NSYSU officially issued the EasyCard Alumni Card in February 2018: the "Sizihwan Boost Your Dreams Affinity EasyCard and Alumni Card." Alumni can apply for this card free of charge and enjoy discounts on campus and in select stores. If the card is used to pay, a fraction of the money spent will contribute to a scholarship for low-income students. It is the first public-welfare alumni card in Taiwan that contributes to assisting students under poverty line. Additionally, the EasyCard Corp. also responded to the "Sizihwan Boost Your Dream Scholarship" program, donating two scholarships with a cumulative value of NT\$200,000 to disadvantaged freshmen in 2017.

### Alumni Shared Their Start-up Experience and Advancements with the New Southbound Policy

The Youth Development Administration, Ministry of Education, selected 26 Taiwan startups participating in the U-start plan, led by the Office of Industrial Collaboration and Continuing Education Affairs of NSYSU, to go to Thailand and Indonesia for exchange. Among them were iDea Mobile Tech Inc. and Public Co., Ltd., two startups founded by Zhongshan Alumni and cultivated by NSYSU. Among them, the two startups iDea Mobile Tech Inc. and Youtago Ltd. were formed by alumni of NSYSU and were cultivated and founded by the NSYSU Incubation Center. iDea Mobile Tech Inc. invented an application called "Phone Doctor", which detects the health status of mobile phones. This trip will serve as a reference for its advancement on the Indonesian market and for adjusting its operational direction. Youtago Ltd. is developing a second-hand mobile phone resale system. This trip has established a relationship with the largest supplier of mobile phone parts and components in the region to further understand the preferences of mobile phones in Southeast and South Asia, which will greatly benefit the future product development of the company.



### 舊振南挺劇藝系學生 畢業製作《女兒紅》

校友企業「舊振南」百年餅店支持藝文活動，大力贊助劇場藝術學系年度畢業製作《女兒紅》，該劇與海籽劇團合作，在高雄大東文化藝術中心演出，藉由一趟溯史尋根的家族巡禮，獲得航向未來的勇氣，透過演繹劇中角色，傳達未經社會化包裝的真實情感，帶領觀眾進入歷史記憶，尋找生命中安定的力量。

### Jiu Zhen Nan Taiwan Pastry Supports "Wedding Memories", the Graduation Production of Students from the Department of Theater Arts

Jiu Zhen Nan Taiwan Pastry, a century-old bakery, is a dedicated supporter in the fields of arts and culture. This year they generously sponsored the 2018 graduation production, "Wedding Memories", by the Department of Theater Arts. With collaboration with Sea Seed Theatre, the show was staged in Dadong Arts Center in Kaohsiung. This show is about one family's root-searching process, through which we see how the characters regain their strength and power to march towards the future. The emotions expressed through the characters are genuinely personal; nevertheless, the audience can relate to them and rebuild historical memories among the community and regain stabilizing power in lives.





### 畢業典禮結合校友徵才拚就業

106 學年度畢業典禮，校友服務中心首度結合 36 家校友相關企業，舉辦「徵薪挺你，中山大學 Carry You」徵才活動，相關校友企業涵蓋科技業、製造業、服務業、金融業等四大產業別，共釋出約 2 千個職缺。此外，日月光半導體為培育工程領域人才，也提供 180 萬獎學金嘉惠中山學子，讓優秀學生安心向學。



### The Alumni Service Center Provides Real Employment Opportunities

At the 2018 graduation ceremony, the Alumni Service Center gathered 36 alumni-related companies for the first time to hold a recruitment event called "Whole Heartedly, NSYSU Carry You". The relevant alumni companies covered the fields of technology, manufacturing, the service sector, and finance. Approximately 2,000 jobs were advertised. Additionally, to cultivate talent in the field of engineering, the Advanced Semiconductor Engineering, Inc. offered NT\$1.8 million worth of scholarships to outstanding students to provide them with the opportunity to continue their studies without financial concerns.

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