National Sun Yat-sen University 国立中山大學 | 年報 Report



02	校長的話 From the President
06	中山概覽 University Overview
18	校園建設 Campus Facilities
24	研究亮點 Research Highlights
38	專業教育 Professional Education
48	創新產學 Innovations in University-Industry Collaboration
56	全球視野 Global Connections
64	拓展與區域連結 Outreach and Regional Alliances
70	校友貢獻 Alumni Contributions



From the President 校長的話

11111

133305





因著世代變遷、全球化及國際競爭與跨域轉 型,高教面臨革新挑戰,各大學皆為站上世界 舞台蓄勢待發。本校過去在教育部邁向頂尖大 學計畫補助下,積極投入研發與教學,成效斐 然。根據2016年ESI資料庫顯示,本校共有十 大領域進入全球前1%;2017年QS全球大學 學科排名,共14學科入榜,躋身全球前50名 最佳新興大學之列。

過去一年,本校「亞太海洋研究中心」黑潮發 電測試成功,洋流發電技術獨步全球;同時創 設全亞洲唯一的「氣膠科學研究中心」,大力 投入與PM2.5相關的研究;此外,響應政府南 進政策,設立「東南亞研究中心」,秉持在地 連結、全球視野觀點,迎向高教新脈動。 為回應社會與產業需求,本校依循校務發展藍圖,擘劃 深耕教育,多年來已培育出許多傑出校友,在全球各領 域嶄露頭角。除持續作育英才,更以豐厚的海外獎學金 和企業實習機會拔擢弱勢學子,秉持「讓生命在中山轉 彎」的理念,促進社會流動,創造平等未來。

本校身為大高雄之學術、文化、人才培育及產業發展的發動機,期能在現有的堅實基礎上,以多元(Diverse)、 創新(Novel)、冒險(Adventurous)的DNA精神,持續創新發展,深耕教研沃土,厚植區域連結,接軌國際 合作,善盡社會責任。

校長 鄭英耀 謹識 2017年9月

校長的話 From the President

Generational change, globalization, global competition, and cross-domain transition not only bring new challenges to higher education but also encourage universities in Taiwan to strive to be a presence on the world stage and gain international recognition. In recent years, with the help of the Aim for Top Universities Grant from the Ministry of Education, National Sun Yat-Sen University (NSYSU) has performed highly in research and development and academic teaching. According to the Essential Science Indicators Database, NSYSU currently has ten academic domains ranked in the top 1% worldwide. Moreover, NSYSU entered the 2017 QS World University Rankings in 14 disciplines, thereby making it one of the top 50 emerging universities in the world.

NSYSU has enjoyed several critical achievements in research so far in 2017. First, the Asia Pacific Ocean Research Center at NSYSU conducted a successful test on Kuroshio Current power generation, and thus the center now possesses the most advanced marine current power generation technology worldwide. Second, the Aerosol Science Research Center for PM2.5-related research was established. Third, the Center for Southeast Asian Studies was launched to apply a global perspective to local industries through higher education. NSYSU follows a blueprint for education and school development designed to meet the needs of society and industries. Throughout years of dedication to education, the school has cultivated numerous eminent alumni who have made great contributions to various fields worldwide. To enable NSYSU to serve as a turning point in the life of each student while promoting social mobility and creating an equal future, NSYSU supports vulnerable students by offering opportunities for prestigious overseas scholarships and corporate internships.

NSYSU is the key force driving Greater Kaohsiung's academic advancement, cultural prosperity, talent cultivation, and industrial development. With its solid base and culture of diversity, novelty, and adventure, NSYSU will continue to strive for innovation and excellence in academia and research while building stronger regional bonds, pursuing international collaboration, and fulfilling its social responsibility.

President (joggar Ch

September 2017





University Overview 中山概覽

University Motto 校訓

博學 審問 慎思 明辨 篤行 Erudite, Interrogated, Deliberate, Discerning, and Persistent

Vision 願景

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

Goals 目標

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 提升國際學術競合力 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



中山大學於1980年在高雄西子灣畔建校,以「海洋」教育與研究為發展特色,成為兼具人文與科技並重之精緻研究型大學,近年來在國際學術成果上表現亮麗,躋身國際知名一流大學之列。

2017年QS世界大學排名,本校排行 全球第388名,全國第8名:全球大學 學科排名,共有14個學科入榜,居全 國第5,名列全球前50名最佳新興大 學。特別是海洋、工程、管理、社會 人文的學術菁英之國際移動力,表現 優異。本校具備卓越的研究基礎與實 力,ESI資料庫十大領域論文被引用 次數居全球前1%。

本校以美國聖地牙哥加州大學為標竿 學校,數年來雙方緊密的學術交流, 為本校國際合作開啓歷史新頁。此 外,與俄羅斯國家科學院轄下的P.P. Shirshov海洋研究中心合作,藉其世 界頂尖的海下技術及海底搜尋經驗, 強化本校海洋科學領域的深度。配合 政府新南向政策,與東南亞國家如泰 國合作雙聯學位發展生醫領域:並與 菲律賓共同建立IC設計研究中心。本 校以「在地連結全球視野」為精神, 積極推動跨領域合作,應用創新學術 價值,轉化為產業具體能量,提升人 類生活福祉,為永續未來努力。 Established in 1980 near Sizihwan, Kaohsiung, National Sun Yat-sen University (NSYSU) is a marine education–specialized quality research university emphasizing both liberal arts and technology. In recent years, NSYSU's impressive international academic performance has made the school among the firstclass universities of the world.

In the 2017 QS World University Rankings, NSYSU was ranked 388th worldwide and eighth in Taiwan. In the rankings by subjects, 14 disciplines NSYSU specialized in are counted, the school ranks fifth in Taiwan. NSYSU is also listed among the top 50 best emerging universities in the world. The academic global mobilization is doing especially well in marine, engineering, management, and social humanities. In the 10 major research fields, NSYSU's number of papers listed in the Essential Science Indicators database and number of citations are both in the top 1% in the world.

The University of California San Diego (UCSD) was set as the benchmark university by NSYSU. For years, NSYSU has engaged in frequent academic exchange with UCSD, which has opened a new page for NSYUS international cooperation. NSYSU also collaborates with the P. P. Shirshov Institute of Oceanology of the Russian Academy of Sciences in academics and research. The goal is to increase the depth of NSYSU's marine science expertise by learning about world-leading undersea technology and seabed exploration from P. P. Shirshov. In the future, in conformity with the government's New Southbound Policy, NSYSU will team up with Thailand for joint degree to develop biomedical science research. In addition, NSYSU will work with the Philippines to build an IC design-oriented research center. NSYSU's excellent academic performance has been achieved because of the spirit of the school, which is based on building local links with a world vision.



中山概覽 University Overview



105學年度專任教師人數為505人

The total number of full-time faculty members is 505 for academic year 2016-2017.



105學年度行政人員人數為778人

The total number of full-time staff is 778 for academic year 2016-2017.



註:統計日期為2016年10月15日 Remarks: Figures as at October 15, 2016



統計至105學年度(2017年9月12日),畢業生總人數為55,600人

The cumulative number of graduates is 55,600 as of September 12, 2017.

畢業生畢業學年度分布 Number of graduates by academic yea	rs
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
100-104學年度(2011-2016 AY)	12,322
105學年度(2016-2017 AY)	2,124
總人數 Total	55,600

103學年度畢業生畢業後一年流向調查

Employment Survey - one year after graduation (Statistics for 2014 – 2015 academic year graduates)

學士班畢業人數1,024,完成調查人數743,回覆率72.6% No. of graduates 1,024, no. of respondents 743, response rate 72.6%





碩士班畢業人數1,248,完成調查人數868,回覆率69.6% No. of graduates 1,248, no. of respondents 868, response rate 69.6%

博士班畢業人數123,完成調查人數77,回覆率62.6% No. of graduates 123, no. of respondents 77, response rate 62.6%





105年度收入分析 Income analysis as of 2016

	単位・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	1,051,430,000	31.40%
競爭型收入 Competitive funding	296,335,138	8.58%
自籌收入 Self-generated income		
學雜費收入 Tuition and fees	536,375,333	16.02%
產學合作收入 Academia-industry cooperation	230,712,140	6.89%
政府科研補助及委辦收入 Government subsidies for scientific research or from govern- ment commissions	896,111,800	26.76%
資產使用及權利金收入 Facility management and entitlement premium	144,681,342	4.32%
推廣教育收入 Continuing education	54,943,443	1.64%
受贈收入 Donation income	60,025,157	1.79%
財務收入 Financial revenues	48,534,282	1.45%
其他收入 Other income	29,554,922	0.88%
合計 Total	3,348,703,557	100.00%

備註:

1. 學雜費收入已扣除減冤數21,330,379元。

2. 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. Facility management and entitlement premium include dormitory fees, parking and other venue fees.

105年度支出分析 Expenditure analysis as of 2016

	單位:九	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	1,682,753,781	49.36%
建教合作成本 Cooperative education expenses	1,068,110,385	31.33%
推廣教育成本 Continuing education expenses	50,056,722	1.47%
學生公費及獎勵金 Students scholarship and fellowship expenses	171,383,742	5.03%
管理及總務費用 General and administrative expenses	303,001,534	8.89%
雜項業務費用 Miscellaneous operating expenses	14,984,606	0.44%
雜項費用 Miscellaneous expenses	119,093,250	3.49%
合計 Total	3,409,384,020	100.00%

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. Miscellaneous operating expenses indicate admission examination operating costs.

2. Miscellaneous expenses indicate venue costs.



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	•	•	•	
	音樂學系	•	•		
	劇場藝術學系	•	•		
	哲學研究所		•		
	化學系	•	•	•	
	物理學系	•	•	•	
	生物科學系	•	•	•	•
理學院	應用數學系	•	•	•	
	生物醫學研究所		•	•	
	醫學科技研究所		•		
	加速器光源與中子束應用國際博士學位學程			•	
	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	•	•	•	
工學院	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		•*		
	企業管理學系	•	•	•	
管理學院	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		•		

中山概覽 University Overview



* 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		•		
	Department of Chemistry	•	•	•	
	Department of Physics	•	•	•	
	Department of Biological Sciences	•	•	•	•
College of	Department of Applied Mathematics	•	•	•	
Sciences	Institute of Biomedical Sciences		•	•	
	Institute of Medical Science and Technology		•		
	International Ph.D. Program for Synchrotron Radiation and Neutron Beam Applications			•	
	Department of Electrical Engineering	•	•	٠	
	Department of Mechanical and Electro- Mechanical Engineering	•	٠	٠	
	Department of Computer Science and Engineering	•	٠	٠	
College of	Department of Materials and Optoelectronic Science	•	٠	٠	
Engineering	Department of Photonics	٠	٠	٠	
	Institute of Environmental Engineering		•	•	•
	Institute of Communications Engineering		٠	٠	
	International Master's Program in Electric Power Engineering		•*		
	International Master's Program in Telecom- munication Engineering		•*		
College of Management	Department of Business Management	•	•	•	
	Department of Information Management	٠	•	•	٠
	Department of Finance	٠	•	٠	٠
	Institute of Public Affairs Management		٠	٠	٠

中山概覽 University Overview

College	Department / Institute	Under- graduate	Master	Ph.D.	In Service Master
College of	Institute of Human Resource Management		•	•	•
	Institute of Marketing Communications		•		•
	Master of Business Administration Program in International Business		•		
	Global Human Resource Management English MBA Program		•		
Ū	Executive Master in Business Administration				•
	Cross-Strait Executive Master of Business Administration				•
	Industrial Technology Graduate Program in Financial Innovation		•		
	Department of Marine Biotechnology and Resources	•	•	٠	
College of	Department of Marine Environment and Engineering	•	•	٠	
Marine	Department of Oceanography	•	•	•	
Sciences	Institute of Undersea Technology		•		
	Institute of Marine Affairs		•		
	Doctoral Degree Program in Marine Biotech- nology			٠	
	Department of Political Economy	•			
College of Social Sciences	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				•

* Only for international students.



Campus Facilities 校園建設

本校為實踐綠色校園之願景,推動「節能與智慧校園」、「安全與友善校園」及「緑美化與建設校園」等三個面向,規劃節能減碳、水資源管理、友善校園及校園網路維運等措施,創造安全與永續之校園環境。尤 其在推動綠色交通方面,著力甚多,包括翠嶺道及電資大樓周邊道路鋪 面更新,擴寬武嶺宿舍出入口路面、另規劃校園智慧交通管理系統、設 置即時行車速限顯示裝置、警示速度及安全事項,以營造環保、安全之 校園環境。

NSYSU is building a green campus through new developments in three areas: energy-saving and smart technology, safety and friendliness, and green landscapes and architecture. Many measures that have been adopted for creating a safe and sustainable school environment are focused on energy saving and carbon reduction, water resources management, user friendliness, and campus network maintenance and operations. The school is also promoting green transportation by repaving Tsuiling Road and the streets around the Building of Electrical Engineering and by widening the entrance road to Wu-ling Dormitory. For ecofriendliness and safety, a smart campus traffic management system with a real-time speed limit display for speed and safety alerts will be installed in the future.

* 2 2



綠色用電節能

以LED燈管取代3萬多支傳統燈管, 大幅節省用電量:持續改善既有之中 央空調系統,建置智慧型節能空調負 載監控系統。對於小型空調,推動設 施節電精進計畫,逐步汰換老舊冷氣 機,安裝節能機板(控制最低設定溫 度26℃及3小時自動關機)及智慧插 座,透過大數據資料,利用雲端管理 排程及供電控制,夏季時控制運轉時 間,並配合台電抑低用電措施,避冤 浪費電力。

智慧電網架構

本校目前共設置719顆數位電錶,即 時監控學校用電情形,後續將以智慧 電網收集資料,結合大數據運算及分 析,執行用電預估及管理。此外,本 校已建置雙迴路供電之十大饋線主幹 電網,將持續優化該電網架構,提供 優質的用電環境。





Green Power and Energy Saving

By replacing conventional fluorescent tubes with LED tubes, NSYSU has reduced electric power consumption significantly. Aside from the ongoing upgrade of the central air conditioning system, the school has also installed a smart energy-saving air conditioning load monitoring system. For small-scale air conditioners, we have implemented an energy-saving enhancement project by retiring old air conditioners, installing an energy-saving motherboard (with 26°C set as the lowest temperature and automatic switch-off after three hours) and smart outlets. The school is also taking advantage of big data by using cloud management scheduling and power supply control to regulate air conditioning hours in summer and to comply with Taipower's energy-saving policy.

Smart Electrical Grid Framework

NSYSU has installed 719 digital meters for real-time monitoring of the school's energy consumption. In the future, smart electrical grids will be used to collect data, and together with big data computation and analysis, energy consumption estimation and management can be achieved. In addition, the school has built a ten-feeder main electrical grid dual-loop power supply and will keep optimizing the electrical grid structure for a high-quality electricity environment.

水資源管理

2016年汰換自來水主要幹管與優化抽水 馬達之能源利用率。於海洋科學院、文學 院、藝術大樓、行政大樓與翠亨E棟之配 水池加裝或汰換數位水表,以達負載節能 反節水目標。後續將建置水資源管理系統, 逐步裝設智慧水錶,即時掌握用水資訊,降 低漏水率,目前校區漏水已降至10%以内。

綠色交通

推廣綠色載具及公共交通系統,新闢「橘 1C」公車行駛至學生宿舍區及文學院; 校園除提供196台公共腳踏車,另設置校 園智慧電動二輪車租賃站,將增設400台 電動二輪車。此外,學生會推動機車共乘 活動,在管理學院停車場、女生宿舍、男 生宿舍、文學院等地點設有共乘指定地 點,未來將建立專屬共乘APP,為校内 交通盡一份力。

Water Resource Management

In 2016, the school had its main tap water pipes replaced and optimized the water pump energy efficiency. For the Marine Science Building, the Liberal Arts Building, the Fine Art Building, the Administration Building, and Tsuiheng E Building, a distribution reservoir was built for each building, and the old digital water meters were replaced to save energy and water. Aside from installing a water resource management system, the school is planning to gradually switch to smart water meters to control real-time water consumption and to reduce water leakage. Currently, we have reduced campus water leakage to 10% or less.

Green Transportation

NSYSU promotes green vehicles and public transportation. The Orange 1C public bus goes to the student dormitories and the College of Liberal Arts. As well as 196 public bikes, there is a campus smart electric bike rental station, which will have as many as 400 electric bikes for rental in the near future. To promote scooter pooling, the NSYSU Student Association has established scooter pool stations at the



College of Management, women's dormitory, men's dormitory, and the College of Liberal Arts. In the future, a scooter pooling app will be released to improve campus traffic.







學生宿舍整修

本校學生宿舍區共有13棟建築物,因應經濟環 境及生活水準的進步,自2009年起逐年改善 宿舍環境,提昇住宿品質。105學年度整修武 嶺三村研究生宿舍,包括設備更新、交誼廳家 具、衛浴空間整修等,營造優質住宿環境,提 升學生學習效能。

菩提老樹師生見證重生

2016年9月莫蘭蒂颱風重創高雄,本校最具代 表性的菩提樹遭受重擊,其中一棵幾近全倒、 三棵樹幹全數斷裂。在總務處緊急搶救後,學 生會發起老樹重生儀式,近百名師生見證老樹 由吊車扶正,並在老樹前分享菩提樹下的回 憶。菩提廣場是師生重要的活動場域,余光中 教授曾與已故詩人周夢蝶在此處談論詩道,周 夢蝶更於此處寫下《菩提樹下》著名詩作。

Student Dormitory Overhaul

Thirteen buildings comprise the NSYSU dormitory area. Thanks to greater prosperity and higher living standards, the school has been improving dormitory quality and environments since 2009. In the 2016 academic year, Wu-ling Village No. 3, a dormitory for graduate students, was refurbished; the equipment was upgraded, new furniture was added to the student lounge, and the bathrooms were repaired and renovated to provide students with a higher quality dormitory environment for more effective learning.

Faculty and Students Celebrate Revitalization of School Bodhi Trees

Typhoon Meranti struck Kaohsiung in September 2016, causing damage to many places, and the Bodhi Trees on the NSYSU campus, an important symbol of NSYSU, were not spared; one Bodhi Tree collapsed completely, and the trunks of another three Bodhi Trees broke. Fortunately, the trees were rescued by the General Affairs Office, and to celebrate the rescue, the NSYSU Student Association held a Bodhi Tree revitalization ceremony. Nearly 100 faculty members and students attended the event, where a crane restored the tilted trees. The Bodhi Tree Plaza is a key venue for many NSYSU activities and events. Professor Kwang-chung Yu and the late poet, Meng-tieh Chou, held their dialogue on poetry there. Chou also wrote his acclaimed poem *Under a Bodhi Tree* there.



校園建設 Campus Facilities



圖資跨國聯防 資安全面升級

圖書與資訊處與日本國立研究開發法人情報通信研 究機構的「網路安全研究所」簽訂策略聯盟,雙方 合作協助中山導入「網路攻擊監測系統」,全面提 升資訊安全防禦力。該監測系統利用暗網的流量及 圖像化監控技術,即時提供告警,讓合作單位提早 進行網路防護。全球已有多個國家及教育單位與日本 合作導入該系統,藉由封包交換獲取更多網路攻擊的 情報,除提升資安技術,也促成國際資訊安全聯防。



註:本圖由日本國家信息通信技術研究所 (NICT) 授權使用 Remarks: This picture is authorized by the National Institute of Information and Communication Technology (NICT), Japan

International Collaboration to Detect Network Attacks

Office of Library and Information Services has formed a strategic alliance with Japan Cybersecurity Research Institute of National Institute of Information and Communications Technology (NICT), by introducing the Network Incident Analysis Center for Tactical Emergency Response (NICTER) to enhance the ability of information security defense. The system observes the traffic of the darknet through visual monitoring. It can provide an alert immediately once network attacks detected, allowing to perform network security protection in advance. Numerous countries and educational institutions have aligned with NICT and imported the system. Through the exchange of network packets, more information on network attacks will be obtained to facilitate international collaboration on information security defense.



Research Highlights 研究亮點

本校遵循校務發展的藍圖,為成就「邁向國際頂尖一流大學」,成立兩大頂尖的「亞太海洋研究中心」及「電子商務與網路社會研究中心」,並整合「大規模多 天線系統研究中心」、「功能性結晶非晶複合物研究中心」、「轉譯科技醫學研究 中心」、「人文創新與社會實踐研究中心」、「跨領域及數據科學研究中心」等五 大研究中心,深耕學術研究能量,並輔以務實的鼓勵措施,如彈性薪資、延攬優秀 人才方案;傑出講座、中山講座、西灣講座及特聘教授、特聘年輕學者獎項,以提 高研究動能。2017年研發效能穩定成長,SCIE、SSCI、AHCI的論文以及高被引 論文的量和質皆有成長,在ESI資料庫22個領域中,共有工程、材料科學、植物與 動物科學、化學、臨床醫學、藥理及毒物學、電腦科學、數學、社會科學、全領域 等10個領域的論文入榜,被引用次數進入全球前1%,研發效能的提升有目共睹。

To become a world-class university, NSYSU has not only established two major research centers (the Asia Pacific Ocean Research Center and the Electronic Commerce and Electronic Society Center), but has also integrated numerous existing research institutions to boost the school's academic and research potential. NSYSU has also adopted concrete and incentive measures to spark research motivation, such as implementing a faculty merit pay system and organizing talent recruitment awards (e.g., the Distinguished Chair Professor Award, Sun Yat-sen Chair Professor Award, Siwan Chair Professor Award, Distinguished Professor Awards, and Distinguished Junior Research Scholar Award), resulting in steady growth in the school's research and development (R&D) performance in 2017. Both the quality and quantity of NSYSU's papers presented in the Science Citation Index Expanded (SCIE), Social Science Citation Index (SSCI), and Arts and



學術界重量級榮譽-教育部國家 講座、科技部傑出研究獎及吳大猷 獎公布,本校電機工程學系講座 教授翁金輅獲頒教育部第20屆國 家講座;物理學系講座教授張鼎 張、電機工程學系特聘教授劉承 宗、海洋科學系特聘教授劉承 宗、海洋科學系特聘教授出慶章 榮獲科技部105年度傑出研究 獎,資訊管理學系教授徐士傑奪 得吳大猷先生紀念獎。此外,本 學年度新設立李登輝政府研究中 心、氣膠科學研究中心、東南亞 研究中心及舊振南品牌研究中心; 民意與市場調查研究中心並獲企業 挹注全新啓用。

本學年度教師研究亮點包括黑潮 發電、颱風催動「生物幫浦」增3 倍吸碳力、糙體銳齒鰕虎食魚鰭 及校園議題數位交流平台iConcern 等,皆獲媒體大篇幅報導,展現 學術研究之社會影響力。 Humanities Citation Index (AHCI) as well as those of highly cited papers have increased. Among the 22 fields of the Essential Science Indicators (ESI) database, NSYSU's papers are listed in ten fields: engineering, materials sciences, plant and animal science, chemistry, clinical medicine, pharmacology and toxicology, computer science, mathematics, social sciences, and multidisciplinary. In addition, the number of citations of NSYSU papers is also in the top 1% worldwide. These facts represent solid evidence of the school's improved R&D performance.

Among the high academic honors bestowed on NSYSU faculty were the Lifetime National Chair Professorship of the Ministry of Education (MOE), Outstanding Research Award of the Ministry of Science and Technology (MOST), and Ta-You Wu Memorial Award, MOST. Chair Professor Wong Kin-lu of the Department of Electrical Engineering was announced as the recipient of the 20th Lifetime National Chair Professorship of the MOE. Chair Professor Chang Ting-Chang of the Department of Physics, Distinguished Professor Cheng-Tsung Liu of the Department of Electrical Engineering and Chin-Chang Hung of the Department of Oceanography were announced as the recipients of the 2016 Outstanding Research Award of the MOE. Furthermore, Professor Jack Shih-Chieh Hsu of the Department of Information Management was revealed as the recipient of the Ta-You Wu Memorial Award. This year, NSYSU also opened several research centers, including the Lee Teng-Hui Center for Governmental Studies, Aerosol Science Research Center, Center for Southeast Asian Studies, Jiu



Zhen Nan Brand Research Center, and Public Opinion Polling and Market Survey Research Center funded by corporate.

Highlights from this year's NSYSU faculty research include Kuroshio Current power generation, a "biological pump" that tripled carbon absorption using typhoon's energy, discovery of fin-eating Smilosicyopus leprurus, and the establishment of iConcern, an e-forum that allows all NSYSU members to discuss topics related to the school. The media have given each of these studies in-depth coverage, revealing the substantial social impact of NSYSU's academic research.

黑潮發電測試成功 獨步全球

海洋環境及工程學系特聘教授兼副 校長陳陽益帶領的產學研究團隊投 入「黑潮發電計畫」,歷經7年測 試,2016年7月底終於在屏東鵝鑾 鼻海域實測成功。該計畫研發、施 工全由台人自製,完成世界第一座 深海洋流能測試系統,掛載低轉速 的洋流能渦輪機,成功利用黑潮發 電。在每秒1.27公尺的流速下, 達 到26.31千瓦的發電功率,即使在 洋流流速低至每秒0.45公尺,發電 機仍可持續運轉60小時,發電技術 獨步全球。陳陽益教授表示,若在 2030年前,這套發電機模組能在 台灣黑潮流經的東海岸架設達20 座,其發電效能將可支應全台發電 70% 電量,讓台灣朝非核家園的願 景邁出一大步。

Power Generation Testing Completed Successfully Using Kuroshio Current

Senior Vice President and Distinguished Professor Yang-Yih Chen of the Department of Marine Environment and Engineering and his university-industry cooperation team have worked on the Kuroshio power generation project for seven years, and finally in July 2016, they performed a successful field test in the sea near Eluanbi, Pingtong. The project was implemented, developed, and directed only by Taiwanese researchers and the relevant equipment was built by Taiwanese workers. Moreover, it is the world's first testing system for deep-sea marine current power generation. A key component of this system is the low-speed marine turbine, which uses the Kuroshio Current to generate electricity. The power generating capacity can reach 26.31 kilowatts with a current flow speed of 1.27 meters per second; even at a current flow speed as low as 0.45 meters per second, the generator can continue to operate for 60 hours nonstop. This is indeed a world-leading power generating technology. According to Professor Chen, if by 2030 we can install 20 of these power generator modules along the east coast where the Kuroshio flows, the power generated by the modules will be able to provide 70% of Taiwan's power, a big step forward for transforming Taiwan into a nuclear power-free country.

研發风乐記首曾

指導單位×科技部 計畫單位×中山大學海工系,成功大學水工所,國研院海科中心 合作單位×慶富造船股份有限公司(含崑山科技大學),萬機鋼鐵工業股份有限公司,







防治PM2.5 創設亞洲唯一 氣膠科學研究中心

呼應政府對PM2.5提出對策並宣示將 投入能源建設達3兆元,本校成立亞 洲第一個「氣膠科學研究中心」,提 供整合各個與氣膠議題相關領域的平 台,包括由氣膠基礎科學到氣膠對大 氣、海洋、生態環境、人體健康的影 響乃至氣膠於生醫領域的應用,並集 結化學、物理、生醫、公衛、環工、 海洋、教育等相關領域專家學者交流 對話;中心同時也積極推動與氣膠科 學相關產業之產學合作、在地鏈結、 循環經濟及價值創造。氣膠科學是當 前全球性的重要議題。中心目前已組 成一國際諮詢委員會,由多位國際知 名之重量級學者參與,未來將積極與 國際上之氣膠研究學術機構及產業進 行跨國學術及產學交流合作。

The First Aerosol Science Research Center in Asia Launched for PM2.5 Control

Echoing the Taiwan government's strategies on particulate matters (PM) 2.5 and declaration to devote 3 trillion dollars on energy transition plans, NSYSU launched the first Aerosol Science Research Center (ASRC) in Asia. The ASRC is to provide a platform for disciplines related to the issue of aerosols, including the aerosol fundamental science, and the impacts of aerosols in the atmosphere, oceans, ecological environment, and public health to the potential implications of aerosols in the biomedical science. By doing so, scientist and experts from all aerosolrelated fields, in Chemistry, Physics, Biomedical Science, Public Health, Environmental Engineering, Marine Science, and Education may engage in constant dialogues and may exchange ideas regularly. In addition, the ASRC will proactively promote the academia-industry collaboration, strengthen the connections with domestic industry, and encourage the circular economy and value creation related to the aerosol science. The ASRC has already formed an international advisory committee board, with numerous internationally renowned experts and scholars. The ASRC also plans to actively promote and establish international collaborations with major aerosol research institutes and industries.

打造南方智庫 李登輝政府研究中心成立

社會科學院與李登輝基金會合作,成立「李 登輝政府研究中心」。綜觀全球,各著名學 府多以國家領袖之名設置政府研究等相關機 構,旨在針對國家政策與社會現況提出前瞻 性與整合性的研究及建言。該中心於2017年6 月盛大舉辦「台灣第二次民主化研討會」, 邀請前總統李登輝、總統府資政蕭新煌,及 國內多位重量級學者及社會賢達與談,探討 台灣當前青年政治參與的侷限、發展與憲政 倡議。

中心未來將以發展為南方智庫作為具體目標,並以「平衡區域」和「接軌國際」作為 中心主要研究方針,期望對當前的政經體制 與決策提供建言與倡議。並將透過專題研 究、系列講演座談、田野考察等產官學研合 作方式,對南台灣產經制度與社會現狀做一 全面性的利弊盤點,提出前沿性的研究,以 利於台灣平衡區域與接軌國際的推陳。

Lee Teng-Hui Center for Governmental Studies Established as a Southern Think Tank

The Lee Teng-Hui Center for Governmental Studies was jointly founded by the College of Social Sciences and Lee Teng-Hui Foundation. Many famous schools in the world have named institutions for governmental studies after important political leaders; these institutions provide proactive and integrative suggestions for state policies and social conditions. In June 2017, the Lee Teng-Hui Center for Governmental Studies held Taiwan's Second Democratization Seminar and invited former President Lee Teng-Hui, Senior Presidential Advisor Hsin-huang Hsiao, and prominent scholars and community leaders to explore the limitations and development of youth political participation and to propose constitutional amendments. To become a southern think tank, the center's research goals are to promote regional balance and align Taiwan with the international trends so that its research findings offer insightful suggestions or solutions for the current political and economic systems and decision-making. Through a series of activities held jointly by industries, government, academia, and research, South-



ern Taiwan's industry, economic system, and social conditions have been comprehensively reviewed to identify the advantages and disadvantages. Meanwhile, advanced studies will be proposed to assist Taiwan to attain regional balance and be aligned with the international trends.



培育新南向人才 設置東南亞研究中心

本校新成立「東南亞研究中心」,未來將致力 成為促進南方國家發展之智庫,以高雄作為南 向的新門戶,提供政策建言並培育人才。高雄 作為南向的新門戶有兩個獨特優勢,其一是熱 帶城市的治理經驗,其二為工業港灣城市的發 展經驗。本校將規劃設計核心課程(學程或學 位),內容以雙邊發展的核心議題為主,包括 農工部門的流通、產業技術、金融服務、城市 治理、環境影響評估、能源與勞動人權等。透 過學校、智庫、官方與台商系統等單位協力合 作,揀選有利於雙邊在地方發展之議題進行深 入研討。

除培育合適的東南亞與台灣的學生,也針對各 國當地需求設立短期的在職專班,畢業後可回 在地國政府機關,或者可以安排到在地台商公 司任職。培養出一群具有台灣經驗的東南亞幹 部,他們將是橋接台灣發展與母國發展最重要 的橋梁,成為台灣南向的重要資產。

Center for Southeast Asian Studies Established to Cultivate Talent for New Southbound Policy

To support Taiwan's New Southbound Policy, for which Kaohsiung serves as the bridge for extending Taiwan's development to Southeast Asian countries, NSYSU established the Southeast Asia Research Center as a think tank promoting Southeast Asian countries' development, offering policy-makers insightful advice, and cultivating talent. NSYSU will develop bilateral developmentoriented core courses (programs and degrees), offering in-depth investigation and discussion of mutually beneficial local development topics selected according to the needs of the cooperating schools, think tanks, governments, and Taiwanese enterprises. Aside from cultivating suitable Southeast Asian and Taiwanese students, the school will also launch short-term in-service training programs to prepare students to work for local government agencies and Taiwanese businesses in their home countries. In the future, talents from Southeast Asia will accumulate work experience in Taiwan and become an important asset for achieving Taiwan's goal of linking its development to that of South Asian countries.



研究亮點 Research Highlights

攜手漢餅龍頭舊振南 成立品牌研究中心

本校與百年企業、中式漢餅龍頭舊振南食 品股份有限公司攜手成立「國立中山大學 舊振南品牌研究中心」,為南台灣第一個 頂尖大學與企業共同創設的品牌研究中 心。舊振南品牌研究中心將提倡以品牌為 主題的教學推廣與研究開發,並協助產業 界提升品牌經營策略的理念與能力。每年 預計辦理五場「舊振南品牌講座」,邀集 國內外知名品牌企業經營者蒞校演講,未 來也將提供在地產業諮詢輔導。

崇恩醫療集團挹注 民調中心全新啓用

民意與市場調查研究中心顛覆主流民調趨勢,除了傳統電話訪問,更結合網路、手機等新興媒體調查方式,提供專業多元民調服務。2016年11月民調中心獲崇恩醫療集團挹注,舉行更新啓用暨揭牌典禮, 未來將結合大數據分析,以符合當前民調趨勢。

Jointly with Jiu Zhen Nan Pastry Establishing Brand Research Center

NSYSU joined hand with Jiu Zhen Nan (JZN) Pastry Limited and established NSYSU JZN Brand Research Center. The center is the first brand research center in Southern Taiwan through the collaboration of a top academic university and the enterprise. The NSYSU JZN Brand Research Center will focus on instruction, promotion, research, and development on branding. The center will also assist industries in enhancing marketing strategies and abilities. The center will host 5 "JZN Brand Seminars" each year by inviting international brand leaders as the speakers to share their experiences. In the future, the center will also provide consulting services to local industries.

Inauguration of a Public Opinion Polling Center Funded by Chong-En Medical Group

The Public Opinion Polling and Market Survey Research Center has successfully revolutionized conventional phonebased public opinion polling by incorporating the Internet, smartphones, and other emerging polling methods into opinion polling; this makes opinion polling more professional and pluralistic. In November 2016, the Public Opinion Polling and Marketing Survey Research Center received sponsorship from the Chong-En Medical Group, and an inauguration ceremony was held. To keep up with current trends, the center will launch big data analysis in the future.







颱風催動「生物幫浦」 增3倍吸碳力

海洋科學系特聘教授洪慶章投注十餘年精 力「與颱風搏鬥」,每年必須在海上颱風 警報發布前,循颱風可能路徑,冒險搭船 出海蒐集資料。其研究證實,颱風能將海 洋的吸碳能力增加三倍,但光靠自然現象 是不夠的,必須輔以人工方式,將深海的 養分擾動到海平面,增加微細藻類養分, 才能在平時擴增海洋的吸碳能力,研究發 現榮獲國際知名期刊刊登。

專屬脊椎印出來 獨創最新骨材

材料與光電科學學系講座教授黃志青、機 械與機電工程學系教授林哲信與潘正堂團 隊,與中央大學材料所教授鄭憲清,屏科 大副教授林鉉凱,高雄醫學大學骨科團隊 的大同醫院骨科主任陳崇桓等人,共同執 行科技部積層製造專案計畫,費時兩年 多,成功研發出第一款可為民衆量身打 造、由3D列印出之新式金屬玻璃海綿骨置 換體,未來可望藉由在地設計製造之優 勢,大幅降低腰椎手術材料成本,並大為提 高植體耐用性,對患者而言是一大福音。

Carbon Absorbing Power Triples with a "Biological Pump" Harnessing Typhoon's Energy

Distinguished Professor Hung Chin-Chang of the Department of Oceanography has spent more than a decade chasing typhoons. His studies have shown that typhoons can triple marine carbon absorbing power. Nevertheless, relying on this natural phenomenon is not enough; artificial means such as bringing deep marine nutrients to sea level for microalgae is essential for boosting marine carbon absorbing power. This research finding was published in a world-renowned scientific journal.

Customized Spinal Cord 3D Printing with Latest Bone Materials

An additive manufacturing project was commissioned by the MOST to the following: Chair Professor Jacob Chihching Huang of the Department of Materials and Optoelectronic Science, Professor Che-Hsin Lin and Cheng-Tang Pan of the Department of Mechanical and Electro-Mechanical Engineering, Professor Jason Shian-Ching Jang of the Institute of Materials Science and Engineering of National Central University, Associate Professor Hsuan-Kai Lin of National Pingtung University of Science and Technology, and Associate Professor Chung-Hwan Chen of the Department of Orthopaedics of Kaohsiung Medical University, Director of Orthopaedics of Kaohsiung Municipal Ta-Tung Hospital, and his team at the Department of Orthopaedics, Kaohsiung Medical University. After two years of work, they have successfully developed the first customizable replacement cancellous bone made of metallic glass through 3D printing. Patients will benefit from this locally designed and manufactured product that not only substantially reduces the cost of lumbar surgery but also enhances the durability of the replacement bone.

研究亮點 Research Highlights

運用3D電子斷層顯微術 陳健群登《Nature》

物理學系助理教授陳健群長期與美國研究團 隊合作,以鐵鉑奈米顆粒為例,利用掃描穿 透式電子顯微鏡收集奈米樣品多角度的2D 原子級影像,克服樣品在照射過程中發生的 漂移、輻射破壞、資料損失、與儀器的硬體 限制,再利用醫學研究中斷層掃描的概念, 發展全新的演算法重構樣品的3D原子結 構,成功達到不需破壞材料即可得知内部的 元素種類及原子位置的目標,並以這些資訊 計算解釋該種顆粒的磁性現象,完全克服費 曼所提出的挑戰,開啓全新的里程碑。因此 獲得全球最頂級期刊《Nature》刊登,亦得 到專文重點強調其研究成果。

魚也吃魚翅 獨步全球新發現

海洋科學系與台灣海洋科技研究中心共同 發表論文「糙體銳齒鰕虎是愛吃魚鰭的 魚」。海洋科學系副教授廖德裕 與研究 團隊前後共花四年時間,在台東山裡的小 溪發現這種會吃魚鰭的魚,從野外觀察到 水族箱飼育,發現食鰭是糙體銳齒鰕 虎(一般俗稱微笑黃瓜鰕虎)的天性;並 從野外捕捉到的個體腸胃道中,發現魚鰭 的殘留,更拍攝到豢養條件下咬掉孔雀魚 魚鰭的事證影片。此研究論文創下兩項紀 錄,為全球首次、也是台灣學界第一次發 現食鰭魚類的學術發表,更是首次證實台 灣本土魚種食用其它魚種魚鰭的紀錄。



Nanomaterial Atom Positions Deciphered: NSYSU Research Published in Nature

Assistant Professor Chien-Chun Chen of the Department of Physics and the international collaboration research team have developed a novel technique that applies the idea of computed tomography from medical imaging to nanomaterial imaging using a scanning transmission electron microscope. They have overcome the problems of sample drifting, radiation damage, missing data and the limitation of the hardware, and implemented the 3D reconstruction of a FePt nanoparticle by a powerful algorithm. Through this technique, scientists may reveal the 3D coordinate and species of individual atoms without cropping or destroying the specimen. The informa-

tion can be used to understand nanoparticle's magnetic properties by computer simulation. Therefore, this work is close to successfully tackling Feynman's challenge. The research is published in the journal Nature and highlighted by Nature News & Views.



New Discovery: Smilosicyopus Leprurus is a Fin-eater

NSYSU Department of Oceanography and Taiwan Ocean Research Institute co-authored the paper "Smilosicyopus Leprurus (Teleostei: Gobiidae) is a Fin-eater." Associate Professor Te-Yu Liao of the Department of Oceanography and research team spent four years studying this fin-eating fish discovered in a mountain stream in Taitung. After field observation and aquarium breeding, the researchers revealed that this fin eater exhibits characteristics of S. leprurus (also known as Sicyopus lepurus). Moreover, fin remains were found in the gastrointestinal tract of S. leprurus samples caught from the field. The researchers also recorded a video of the fish biting off the fins of Poecilia reticulata (guppy) in an aquarium. This research paper represented two firsts. First, it is the world's-as well as Taiwan's-first research paper documenting a fin-eating fish species. Second, it is also the first paper to record and document a native fish species in Taiwan eating the fins of other fish species.



蔣公銅像拆不拆? 數位平台iConcern決去留

國立中山大學校園内的蔣介石銅像究竟要不 要拆?研治學研究所教授廖達琪首創校園議 題數位交流平台「iConcern」,廣邀校内教 職員生上線就銅像拆遷議題發表看法。

iConcern設有校史、政治、哲學與美學,及 空間四個面向說明議題背景,藉由校園中不 同的單位、多樣的管道,擴大校内師生及校 友在平台上的參與,蒐集來自不同面向的意 見;從大量的討論中,探尋出議題解決的辦 法。iConcern與其他平台最大的不同,便 是「以解決問題為發展目標」,期待此平台 能促進學生理性討論、投入公共事務,並培 養換位思考能力以凝聚共識。

民主審議

數位校園

Chiang Kai-shek's Statue Removed or Not? Deciding Its Fate on iConcern, a Digital Forum

Should the statue of Chiang Kai-shek be removed from NSYSU campus? Founder of iConcern (a digital forum allowing NSYSU members to discuss topics related to the school), Professor Da-Chi Liao of the Institute of Political Science invited NSYSU faculty members, staff, and students to express opinions about whether to remove Chiang's statue through this online platform.

On iConcern, this issue is presented from four perspectives: school history, politics, philosophy and aesthetics, and space. Various divisions and channels of the school are incorporated to this forum to encourage the participation of school faculty, students, and alumni so that multiple perspectives can be collected and solutions can be found through comprehensive discussion. A major feature of iConcern that makes it distinctive from other digital forums is its problem-solving-oriented development goal. The school hopes that iConcern will encourage students to participate in rational discussion and public affairs and learn to exercise perspective-taking to reach a consensus.

Concern


榮譽與獎項 105學年度 (2016-2017)

教育部終身國家講座	謝曉星 梁定澎
教育部國家講座	黄志青 翁金輅
教育部師鐸獎	察秀芬
科技部傑出研究獎	張鼎張 洪慶章 劉承宗
科技部吳大猷先生紀念獎	徐士傑
傑出講座	謝曉星 梁定澎 黃志青 翁金輅
中山講座	翁金輅 黃志青 沈博彦 吳致寧 林煥祥 陳鎭東 陳年興 盧展南
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)	戴景賢 黃毅青 謝建台 杜立偉 吳慧芬 郭紹偉 林哲信 周明奇 高志明 陳世哲 許志宏 劉祖乾 李宗霖 鄭英耀 邱文彬 洪瑞兒 洪慶章 賴錫三 洪子聖 楊淑珺 莊豐權 朱訓鵬 陳陽益 紀乃文 張鼎張 劉承宗 曾韋龍 林宗賢
特聘教授(產學研究類)	黃英哲 李宗南
傑出教師(教學類)	嚴成文 謝東佑 梁淑坤
特聘年輕學者	許晉銓 陳至潔 王安智 詹揚翔 李昆澤 王友群 李祁芳 徐士傑 陳健群 蔡維哲
榮譽講座教授	劉維琪 馬振基 翁啓惠 吳靜吉 邱炎春 謝曉星 吳玉山 余劫離 Christian Serge Kharif



Honors and Awards (2016-2017)

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
Outstanding Research Award, Ministry of Science and Technology	Ting-Chang Chang , Chin-Chang Hung Cheng-Tsung Liu
Ta-Yu Wu Memorial Award, Ministry of Science and Technology	Jack Shih-Chieh Hsu
NSYSU Distinguished Chair Professor	Shou-shing Hsieh , Ting-peng Liang Jacob Chih-ching Huang , Kin-lu Wong
Sun Yat-sen Chair Professor	Kin-lu Wong , Jacob Chih-ching Huang Pou-Yan Shen , Jyh-Lin Wu Huann-shyang Lin Chen-tung Arthur Chen Nian-shing Chen , Chan-Nan Lu
Siwan Chair Professor	Peng-Sheng Wei , Nian-shing Chen Ming-Chi Chou , Jimmy C. M. Kao Ting-Chang Chang
Distinguished Professor, Research	Ching-hsien Tai , Ngai-Ching Wong Jen-Taie Shiea , Li-Wei Tu Hui-fen Wu , Shiao-wei Kuo Che-Hsin Lin , Ming-Chi Chou Jimmy C. M. Kao , Shyh-jer Chen Jyh-Horng Sheu , James T. Liu Chon-Lin Lee , Ying-Yao Cheng Wen-Bin Chiou , Zuway-R Hong

Distinguished Professor, Research	Chin-Chang Hung , His-San Lai Tzyy-Sheng Horng , Shu-Chun S. Yang Feng-Chuan Chuang , Shin-Pon Ju Yang-Yih Chen , Nai-wen Chi Ting-Chang Chang , Cheng-Tsung Liu Wei-Lung Tseng , Tsung-Hsien Lin
Distinguished Professor, Industry-Academy Research	Ing-Jer Huang , Chung-Nan Lee
Outstanding Teaching Faculty	Chen-Wen Yen , Tong-Yu Hsieh Shuk-kwan S. Leung
Distinguished Junior Research Scholar	Jim Jinn-Chyuan Sheu Titus Chih-Chieh Cheng , An-Chih Wang Yang-Hsiang Chan , Kun-Ze Lee You-Chiun Wang , Chi-fang Sophia Li Jack Shih-Chieh Hsu , Chien-Chun Chen Wei-Che Tsai
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



Professional Education 專業教育

本校以「讓生命在中山轉彎」為旨,著重人本關懷的教育價值,以學生學習為 導向的教學品質保證機制為基礎,透過完善充沛的教育資源與各類學生學習成 效檢核分析,期許培養具專業能力、富前瞻思維能造福社會,具全球競爭力的 社會領導菁英。

為實踐高等教育公共性,透過學士班「繁星推薦」及「南星計畫」招收弱勢 學生,105學年度達大學部新生之22.5%。此外,亦設立「海納百川」計畫 招收特殊領域傑出人才。

NSYSU adopts a humanistic approach to education with the goal of providing students with life-transforming opportunities here at NSYSU. The school has launched a learning-oriented teaching quality assurance system that examines and analyzes the educational resources of the school and the learning outcomes of students to ensure effectiveness in guiding students to build their professional capacity, fostering a vision of achieving people's welfare and cultivating future leaders with global competitiveness.

To provide more accessible and inclusive higher education for all, NSYSU has launched the Multi-star Project and the Southern Star Project for underprivileged students. In the 2016 academic year, underprivileged students accounted for 22.5% of all NSYSU freshmen. In addition, the school initiated its Inclusive Project to recruit talents from special fields.





學碩博七年畢業 搶攻人才留校

為培育國內學術界接班人,自105 學年度起推出「學士3年、碩士1 年、博士3年」七年育才計畫,提 供高額獎學金,碩士班階段每人補 助4至8萬元;博士班期間,提供 每個月3萬元共108萬元獎學金。 鼓勵博士畢業後出國研究,也有相 關補助配套,希望強化本土博士生 的國際視野及研究實務經驗,歸國 後將優先延攬為中山專任師資。

Nurturing Talents, NSYSU Introducing 7-Year Combined Degree

To cultivate the next generation of researchers, NSYSU has launched the "3+1+3" seven-year talent cultivation program starting spring semester, 2017. The program includes three years to obtain a bachelor's degree, one year for a master's degree, and three years for a doctoral degree. The program also provides scholarships, with 40-80 thousand NT dollars in master's studies, and 30 thousand NT dollars each month during the first three years of study in the doctoral program. NSYSU also provides a complementary support system for students who go abroad to conduct post-doctoral research. To select and promote excellence, in the future, NSYSU will prioritize the employment of PhDs cultivated via this program.



挑戰百萬年薪 聯手台新推金融產碩專班

新鮮人年薪百萬不是夢!財務管理學系首度 與台新國際商業銀行股份有限公司攜手合 作,開辦「金融創新產業碩士專班」,學生 兩年內畢業可直接進入台新銀行就業,寒暑 假還可全時間至台新總部支薪實習。透過產 學共同培育金融領域所需高階創新人才,並 創造學校、企業及學生三贏效益。

玩寶可夢學相對論 物理演示揭密

> 瘋迷全球的「寶可夢」遊戲竟與相對論有關!物理學系將「大學實驗室」和「科學博物館」搬到市區戶外,首次於北部地區舉辦大規模戶外科學展演,在台北市國父紀念館

戶外公園舉辦「生活物 理演示」活動,包括 25項主題共100多個實 驗,内容兼具實用及趣 味性,共20所高中逾 800名學子參與活動, 盛況空前。

Partnership with Taishin International Bank

It's not a dream to earn an annual salary of NT\$1 million for fresh graduates! The Department of Finance partnered with Taishin International Bank (Taishin) to offer Industrial Technology Graduate Program in Financial Innovation.

Students may work for Taishin immediately following their graduation if they graduate within 2 years. In addition, students may intern at the Taishin headquarter with pay during summer and winter sessions. NSYSU has developed high-end innovative talents in finance industry through this university-industry collaboration program, benefiting the university, enterprises, and prospective students.

From Pokemon to the Theory of Relativity through Physics Demonstration

Pokemon GO, an augmented reality game sweeping the world, is related to the theory of relativity! The Department of Physics moved the University Laboratory and the Science Museum out of doors and held the very first large-scale outdoor science fair at National Sun Yat-sen Memorial Hall in Taipei. In total, 25 themes and more than 100 experiments were organized for this event, called Live Physics Demonstration. The science fair swarmed



with people interested in NSYSU's fun and practical experiments; more than 800 students from 20 high schools signed up and enjoyed the outdoors science experience.



邀青年再造農村 「蕉」糖兵團前進旗山

農村議題近年越來越受重視,公共事務 管理研究所規劃心修實習學分,讓學生 親身走入社區、挖掘社區議題,試圖為 農村創造另一種可能。「廠開大門-旗 山糖廠農村願景工作坊」邀大學生走進 高雄市旗山區糖廠社區,活動結合實務 課程,讓學生集思廣益發想社區再造提 案,並融合近年來正夯的「遊程設計」, 為旗山糖廠社區找尋新出路。

實踐數位知識 行傳所化身小編 助小農行銷

行銷傳播管理研究所開設「數位行銷課 程」,透過臉書粉絲專頁、策略聯盟、 線上線下整合行銷、口碑行銷、事件行 銷、病毒行銷與體驗行銷等策略,協助店 家進行數位行銷。課程連結跨領域在地人 才與資源,運用創意與數位行銷的知識與 技巧,協助小農及弱勢團體成功行銷。

Youth for Rural Village Revival in Cishan

Rural village-related issues have had great attention lately. The Institute of Public Affairs Management introduced a mandatory internship for its credit program that brings students to rural communities to learn about rural affairs and create new opportunities for these communities. "Finding a Vision for Cishan Sugar Community" is a workshop that introduces college students to the sugar factory community in Cishan District, Kaohsiung City. The workshop offers practical classes and encourages students to develop a community revival plan through brainstorming. To create more opportunities for the Cishan sugar factory community, tour planning and design, a widely employed notion, is integrated into the workshop.

Students Practice Digital Marketing to Promote Small-holder Farmers

In the course "Digital Marketing" offered by Institute of Marketing Communication, students practiced marketing strategies including Facebook Pages, strategic alliances, online and offline integrated marketing, word-of-mouth publicity, event marketing, viral marketing, and experiential marketing to help the organizations and farmers in digital marketing. By connecting local resources and students to employ creativity and the knowledge and skills of digital marketing, the students' team successfully assisted the marketing of small-holder farmers and disadvantaged groups.



政經系瘋實習 學生化身交通大使

為弭平學用落差,政治經濟學系開設心修 實習學分,媒合數十個校外實習單位,其 中8人選擇進入高雄市政府交通局實習, 參與2017年生態交通全球盛典的籌備與 執行,化身「生態交通大使」,推廣低碳 綠能的交通理念。未來實習學分將搭配政 府新南向政策,讓學生投入新住民及新住 民二代的專案培力實習,提供更多元的職 涯選擇。

老年長照新點子 青銀共遊創意提案奪冠

公共事務管理研究所舉辦「全國大專青年 公共事務提案競賽」,社會學系組成 的「青銀才寶」團隊擊敗全國隊伍奪 冠。「青銀才寶」為銀髮族量身打造「青 銀共遊」套裝行程,由學生擔任小幫手導 覽,協助樂齡大學長輩,並安排銀髮族體 驗野炊、戲劇等,期待能促進青年族群與 銀髮族群間的相互交流,縮小青銀世代的 隔閡,未來也能成為社區長照的一部分。

Students of Political Economy Working as Transportation Ambassadors through Internship

To close the gap between knowledge and skills, the Department of Political Economy has introduced a mandatory internship for its credit program that pairs students with dozens of off-campus internship units. Among all students taking the internship, eight of them chose to do their internships at the Transportation Bureau of the Kaohsiung City Government. Working as transportation ambassadors, the students prepared and implemented the EcoMobility World Festival 2017 promoting green energy and low carbon transportation. To bring students more pluralistic career options, the government's New Southbound Policy will be incorporated into the internship program in the future so that students can participate in internship projects related to recent immigrants and second-generation immigrants.

Elderly Long-term Care: Youth Travel Companion for Elderly People the Winning Proposal

"Qing Yin Tsai Pao" a team organized by students of Sociology won the University Students' Public Affairs Proposal Contest held by the Institute of Public Affairs Management. Qing Yin Tsai Pao designed and planned a package tour for



elderly people. In this special tour targeting elderly people, students are involved as guides and assistants for elderly people to bridge the generation gap; various activities, such as outdoor cooking and theater, are incorporated into the tour to facilitate youth–senior interaction. The team hopes that this package tour designed for elderly people will be part of community long-term care for elderly people in the future.



科技生活新發想 跨領域工程專題競賽 創意多元

工學院舉辦2016跨領域工程專題競 賽,鼓勵大學生探討多元、跨科際、 跨領域的複雜議題,並結合生活與科 技激發創意發想。參賽學生跨領域、 跨系所組隊參加,成果豐碩。如穿上 3D編織的創新智能布料可隨身監測健 康、虛擬實境頭盔結合遠端遙控可打 造千里眼等,參賽作品相當多元,兼 具創新及可商業化呈現。

E世代不思議 資管系畢業成果展

雲端資訊的即時流通和大數據時代正 式來臨,如何結合新興電腦技術建置 遊戲或App平台已蔚為風潮。資訊管 理學系畢業專案成果展,推出不同於 應用程式商店上現有的App内容,展出 成果多元,創意且深具實踐性。

New Technology for Life: Cross-disciplinary Engineering Project Contest Sparks Creative Ideas

The College of Engineering held the 2016 cross-disciplinary engineering project contest encouraging students to explore complex, diverse, cross-boundary, and cross-disciplinary topics and to brainstorm for creative and innovative ideas combining technology with everyday life. Students from various domains formed cross-disciplinary and cross-department teams. Creative ideas, such as wearing an innovative 3D-woven smart fabric for health monitoring, and incorporating virtual reality helmet for long-distance monitoring, that are both innovative and commercially feasible.

Brilliant e-Generation: Information Management Graduation Exhibition

Incorporating big data and cloud data for building games and apps platforms with novel computer technology is big in this era of big data and real-time data flow. At the graduation exhibition of the Department of Information Management, students presented many creative and feasible apps that are distinctive from apps currently available on apps stores.



專業教育 Professional Education

校園證券投資智慧王 財管奪佳績

財務管理學系學生參加臺灣證券交易所舉辦的第十三屆「校園證券投資智慧王知識 競賽」,從全國大學院校2,610隊伍中脫穎 而出。本校的3隊人馬歷經激烈的初賽後全 數打進複賽,並包辦總決賽亞、季軍,表現亮眼。

台電高壓AMI應用競賽 電機系摘金

電機工程學系講座教授盧展南指導的學生 團隊參加台灣電力股份有限公司舉辦的高 壓電力資料創意應用競賽,以「應用AMI 資料確保降壓運轉之電力品質」為題,成 功摘金並抱回12萬元獎金。中山大學團隊 成員為該系碩二生盧育陽與蔡孟霖,碩一 生黃山璞、許元禹及林憶全,五人奪得專 業領域題一校園組金獎。他們透過監測 AMI電表資料發現,當供電能維持一定的 電力品質時,可以降壓運轉,做到既不影 響電力品質、也能減少耗能與線損。





Students of Finance Performs Splendidly at the Smart Campus Securities Investment Contest

Students from Department of Finance participating in the 13th Smart School Securities Investment Knowledge Contest held by the Taiwan Stock Exchange Corporation stood out from a total of 2,610 college teams from all over Taiwan. All three NSYSU teams entered the semifinal, and they won second and third places in the contest. Great job!

EE Students Captures Gold in TPC High Voltage AMI Application Competition

The Taiwan Power Company hosted the High Voltage Advanced Metering Infrastructure (AMI) Load Data Creative Application Competition. A team of students under the supervision of Chair Professor Chan-Nan Lu from Department of Electrical Engineering entered the competition and successfully won the gold medal and brought home the scholarship of NTD 120,000. From the AMI load data, the NSYSU team noticed that when the power supply maintains a certain electric quality, it can execute Conservation Voltage Reduction (CVR), improve efficiency and reduce line loss while maintaining quality.



大學生表現優異 論文登國際期刊

物理學系學士班學生金福源和鄭皓軒, 投入講座教授張鼎張指導的專題研究, 兩人均以第一作者撰寫論文登上國際著 名期刊「應用物理快遞」(Applied Physics Express),並且以優異成績 申請逕讀博士班獲准。

材料與光電科學學系學生簡于傑在講座 教授張鼎張的啓發下,從實驗中找到興 趣、全心投入學術世界,其研究論文登 上全球電子元件領域最好的期刊「IEEE Electron Device Letters」,創下中山大 學登上SCI期刊最年輕的第一作者紀錄。

College Students' Outstanding Research Published in Internationally Renowned Journal

Fu-Yuan Jin and Hao-Xuan Zheng, students of Physics, signed up an independent study with Chair Professor Ting-Chang Chang of Physics during their college senior year. Both successfully published in the international journal, Applied Physics Express as the first author, and admitted directly to doctoral program after finish their undergraduate study.

Third year student Yu-Chieh Chien of Materials and Optoelectronic Engineering inspired by Chair Professor Chang to find the fun in the experiments and to devote himself to research. Chien's research paper has been accepted to the best journal in the field of electronics, the IEEE Electron Device Letters. This achievement made Chien the youngest first author to be published in a SCI journal in NSYSU's records.



專業教育 Professional Education



Archery Team Wins Five Golds, Four Silvers, and Three Bronzes in the National Intercollegiate Athletic Games

The NSYSU archery team did extremely well at the 2017 National Intercollegiate Athletic Games: five golds, four silvers, and three bronzes. The five gold medals were won for the compound individual, the compound mixed pairs, the recurve mixed pairs, the compound mixed team, and the recurve mixed team (breaking the previous record), making the NSYSU

全國大專盃 射箭隊奪五金四銀三銅

射箭隊於2017年全國大專校院運動會表現傑出, 拿下5金4銀3銅的好成績。包括複合弓個人賽金 牌、複合弓混雙賽金牌、反曲弓混雙賽金牌、複 合弓團體賽金牌、反曲弓團體賽金牌並破大會紀 錄,成為全大運射箭項目最大贏家。

南區特優 管樂團創20年最佳成績

中山管樂團成軍20年,參加105學年度全國學生 音樂比賽,在南區決賽中獲得特優榮耀,除了在 管樂合奏大專A組取得第一名,評審更一致給予 九十分以上的高分,最終以平均92.22的成績創下 歷年來最佳參賽成績。 archery team the biggest winner in archery at the National Intercollegiate Athletic Games.

Excellence in the South District: NSYSU Wind Orchestra's Best Performance in 20 Years

Established 20 years ago, the NSYSU Wind Orchestra performed extraordinarily well in the South District Final of the 2016 National Student Competition of Music. The NSYSU Wind Orchestra won first place in College Group A for wind ensemble, and all judges gave it a high grade of 90 points or more. In the end, the NSYSU Wind Orchestra won 92.22 points, which is the best score for the orchestra in 20 years.



Innovations in University-Industry Collaboration 創新產學

本校以「南臺灣產業創新發動機」為發展願景,提供產業及地方政府創新元素, 觸動產業翻轉革新;同時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。

制定各式獎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,新增 技術升等管道。根據政府5+2重點產業,配合本校校務研究辦公室挑選出本校最具 優勢的20項研究主題籌組團隊,結合6大頂尖研究基地,進行聚焦式的技術開發。

To spur innovation in Southern Taiwan's industries, NSYSU is infusing local industries and governments with innovative elements to trigger an overhaul of industry. Moreover, the school is effectively applying its educational and technological assets to boost its income from numerous sources and add value to research–industry integration.

NSYSU has adopted various incentives to encourage faculty members' participation in various university-industry collaboration projects; established criteria for faculty promotion, evaluation, and evaluation waivers; and provided pluralistic channels for technology upgrades. Recently, in accordance with the government's 5+2 key industry policy, NSYSU's Center for Quality Assurance selected the school's 20 most promising research topics and established a team for each of these 20 topics to facilitate focused technology development by collaborating with six top research centers.



大高雄區域已形成金屬加工、醫療器 材、數位内容、體感娛樂、海洋領域 等產業聚落,本校已與高雄市工業 會、港都企業家聯誼會(港都上市櫃 公司)、高雄市醫療器材商業同業公 會建立互動管道,參與會員聯誼活 動,主導「臺灣產學策進會」、「臺 灣海洋策進會」及「西灣產學俱樂 部」,推廣校内或跨校的優質技術。 持續與在地產業的深耕合作。強化與 公部門、協、學會之合作,討論共同 性議題(如工業4.0革命、巨量分 析、積層製造等)及特色議題(國艦 國造、數位創意產業)之合作需求。

2016年本校產學合作績效卓越,政 府機關及非政府機關產學合作計畫達 4.2億元:技術移轉授權金約達2,400 萬元:推廣教育金額約達5,300萬 元,皆超越年度預定目標。為鼓勵師 生勇於創新,本校貨櫃創業基地於 2017年6月正式啓用,鄭英耀校長並 宣布將提撥一億元作為中山創新創業 基金,期能培育更多創新人才。教師 獲獎方面,化學系教授謝建台榮獲科 技部105年傑出技術移轉貢獻獎,海 洋生物科技暨資源學系教授溫志宏勇 奪第13屆國家新創獎。



To benefit from the metal processing, medical equipment, digital content, somatosensory entertainment, and marine-related regional industry clusters in the Greater Kaohsiung area, NSYSU has formed bilateral connections with the Kaohsiung Chamber of Industry, Gangdu Entrepreneurs Association (Gangdu Listed Company), and Kaohsiung Medical Instruments Commercial Association and participated in networking activities with them. NSYSU guides academia-industry groups, including the Taiwan Academia Industry Consortium, Taiwan Ocean Academia-Industry Consortium, and Siwan Industry-Academic Collaboration Club, and promotes advanced technologies developed by the school or through cross-school collaboration in these groups. To widen and strengthen the school's partnerships with local industries, NSYSU will jointly establish a research and development center with businesses in Kaohsiung. The school will simultaneously reinforce its collaboration with public sectors, associations, and societies in exploring not only general topics (e.g., Industry 4.0, macroanalysis, and additive manufacturing), but also specialized topics, (e.g., national shipbuilding and digital creative industries) to create more collaboration opportunities.

NSYSU performed impressively in academia–industry collaboration in 2016. It invested NT\$420 million in its collaboration projects with the public and private sectors. The school has raised NT\$24 million from technology transfer royalties and licensing fees and NT\$53 million from extension education; both figures exceeded the target set for the year.

To foster innovation, NSYSU used shipping containers to build an entrepreneurship base for faculty members and students, and the site was officially launched in June 2017. NSYSU President Ying-yao Cheng also announced that the school will allocate NT\$100 million to the base as an innovation and startup venture fund to foster innovation in students. In terms of NSYSU faculty awards and accolades, Professor Jen-Taie Shiea of the Department of Chemistry was the recipient of the MOST's Award for Outstanding Contribution in Technology Transfer, and Professor Zhi-Hong Wen of the Department of Marine Biotechnology and Resources was honored at the 13th National Innovation Awards.

效法賈伯斯創業 貨櫃基地正式啓用

本校斥資千萬、耗時三年創建全台 唯一擁有正式建照的「貨櫃創業基 地」。更進一步結合西灣天使投資 公司、學界、產業及創投組織組成 跨域的「中山一億創新基金投資委員 會」,針對不同創業發展階段,師生 所衍生的新事業體進行市場潛力評 估,再由校方投資入股,給予每組團 隊最高上限1千萬元的營運補助。

經由兩年來的輔導支持,中山大學 已培育近50組創新創業團隊,其 中,由海洋生物科技暨資源學系碩 博士生及教授共組的「習鑫國際生 醫科技股份有限公司」,則是全台 灣第一個由師生共同成立、地址登 記在大專校院的新創公司,也是校 園衍生企業。初期以販售團隊自行 研發的海洋保養品為主,進一步與 環保永續、精緻農業相互結合。此 團隊不僅榮獲生技醫療產業策進會 第13屆國家新創獎殊榮,日前參 加第20屆莫斯科阿基米德國際發 明展,更勇摘金牌、揚名國際,成 為師生共同創業的典範。





Shipping Container Entrepreneurship Base Inspired by Steve Jobs Officially Opens

After spending three years and tens of millions in New Taiwan dollars, NSYSU has now officially launched its entrepreneurship base, constructed using shipping containers. This cargotecture is the only one in Taiwan to have been granted formal construction permits. NSYSU has further collaborated with the Xiwan Angel Investment Company, schools, industries, and venture capital organizations to form the Committee of the Hundred-Million-Dollar Investment Fund to fund innovations. This cross-disciplinary committee assesses the market potential of faculty and students' startup ventures on the basis of their entrepreneurial stage, and then depending on the evaluation outcome, the school acts as a venture capitalist and invests up to as much as NT\$100 million in these startup ventures for their business operations.

With over two years' of support experience, NSYSU has assisted nearly 50 innovative startup venture groups. Among them, Hsi Hsin International Medical Technology Co., Ltd., formed by postgraduate students and professors of the Department of Marine Biotechnology and Resources, is the first startup venture company to be founded by faculty members and students and registered with a campus address in Taiwan. It is also the first university spin-off company in NSYSU. The company initially focused on selling selfdeveloped marine-based skincare products, and is currently working on incorporating environmental sustainability and quality agriculture into its business model. The team behind this company won the 13th National Innovation Awards of the Institute for Biotechnology and Medicine Industry and was also the gold medalist at the 20th Moscow International Salon of Inventions and Innovation Technologies "Archimedes." In summary, the team has successfully established its reputation overseas and become a role model for joint ventures between students and teachers.



創業潮興起 3團隊獲U-start補助

教育部青年發展署公布「大專畢業生創 業服務計畫(U-start)」第一階段審查 名單,本校創業中心三組創業團隊C&L INN、洄遊吧、六益木船工作室脫穎而 出通過審查,各獲得35萬元經費補助, 將利用這筆經費成立公司,正式營運。

由資訊管理學系碩士班校友組成的「C&L INN」看準在歐美流行的攀岩運動,計 畫建立高雄首座室内抱石攀岩體驗中 心,並期望在台灣推廣攀岩運動。「洄 遊吧」團隊則為海洋環境及工程學系校 友發起,他們主打由定置漁場捕獲至上 岸僅40分鐘之新鮮、友善野生水產品, 透過環保包裝,加入魚種、海洋知識資 訊之視覺化設計,強調與顧客的互動 性,期望建構海洋環境保育、漁村再造 之商業模式。社會學系校友成立的「六 益木船工作室」保留了過去舢舨船的技 術,同時將過去冗長的造船過程濃縮到 3個小時,並推出一天造舟體驗的行 程,期望在四面環海的台灣推廣海洋產 業與活動。

Startup Fever Starting among College Graduates: Three Startup Venture Teams formed by College Graduates Receive Subsidies from U-start

The Youth Development Administration, MOE announced the first-stage candidates for U-start, a startup program for university entrepreneurs. Among many contenders, C&L INN, Fishbar, and Liuyi Wooden Boat Studio are three startup teams of the NSYSU Entrepreneurship Center that were awarded a subsidy of NT\$350,000, which will be used for establishing their companies and starting business operation.

C&L INN, formed by alumni of the Department of Information Management, was inspired by the popularity of rock climbing in Europe and the Americas and thus plans to build Kaohsiung's first indoor rock climbing center to promote sport climbing in Taiwan. Fishbar, founded by alumni of the Department of Marine Environment and Engineering, aims to provide consumers with fresh (i.e., a less than 40-minute lag between catching the fish and bringing them to the shore) and environmentally friendly wild seafood. In addition to adopting environmental friendly packaging and incorporating information about the type of fish and other marine knowledge into the visual design, Fishbar also works to enhance customer interaction and build a business model that protects the marine environment and restores fishing villages. Liuyi Wooden Boat Studio was founded by alumni of the Department of Sociology. In addition



to preserving sampan ship building techniques and compressing the ship building process into three hours, the studio also features services that allow customers to have a one-day ship building experience to promote Taiwan's marine industries and activities.

跨境電商夯 電子商務中心組 產學合作聯盟

「台灣電子商務產學合作聯盟」在 科技部產學小聯盟和教育部頂尖大 學計畫支持下所創辦,由教育部終 身國家講座、資訊管理學系講座教 授梁定澎與產業界14家企業共同 組成,提供企業管道與商業發展研 究院、資策會等相關團體合作,爭 取更多政府資源。聯盟透過產學合 作方式,提供業者電子商務相關專 業人才,同時也讓學生及早了解業 界需求,提升競爭力。

其中,本校電子商務研究中心成 立「EC101電商人才網」,有別 於以往的人才網,增設專案作品的 呈現,讓企業更了解求職者的能 力。同時,也要求企業刊登職缺時 必須填寫薪資範圍,提供業者與電 子商務人才更有效的溝通媒介。

Cross-border E-commerce All the Rage: Electronic Commerce Research Center Establishes Taiwan E-commerce Industry-University Collaboration Alliance

Supported by the Academia–Industry Junior Alliance of the MOST and the Top University Project of the MOE, National Chair Professorship, Professor Ting-peng Liang of the Department of Information Management, and 14 companies from various industries formed the Taiwan E-commerce Industry–University Collaboration Alliance to provide enterprises with a channel to partner with the Commerce Development Research Institute and the Institute for Information Industry so that enterprises can gain more access to government resources. The alliance not only supplies companies with e-commerce personnel through academia–industry collaboration but also enables students to acquire knowledge about industry needs and enhance competitiveness for job seeking.

To meet this goal, the NSYSU Electronic Commerce and Technology Innovation Research Center has established the EC101 e-Commerce Talent Network, whose website, unlike conventional job bank websites, allows job seekers to attach portfolio files to assist enterprises in assessing applicants' competencies while requiring enterprises to list the salary range for the job openings posted. This facilitates communication between enterprises and e-commerce job applicants.





如廁同步驗尿液 與衛浴業者合作研發 智慧馬桶

機械與機電工程學系林哲信教授團 隊,花了五年時間成功研發「新型溶 液感測器」,只要1秒鐘就能檢測出 尿液、唾液、汗水等液體中的酸鹼 度、溫度及離子濃度,數值上傳至雲 端,遠端手機使用者即可快速掌握家 人或患者的生理狀況。

林哲信教授團隊獨創的溶液檢測技 術,未來還能推廣應用於老年長照、 醫療快篩、口腔保健、智慧衣生理感 測及水質監測等領域,「量測反應快 速靈敏,透過手機馬上就看得到」。 林哲信教授指出,本技術也可以與智 能水錶結合,透過「新型溶液檢測 器」,每人皆可由手機監測家中水 質,確保飲用水安全。新技術也可應 用於農業、養殖業及河川環境監測; 檢測唾液則可用於預防蛀牙與牙周病 等口腔護理。





Urine Testing Toilets: Collaborating with the Sanitaryware Industry for Smart Toilets

Professor Che-Hsin Lin of the Department of Mechanical and Electro-Mechanical Engineering spent five years with his team developing a novel liquid sensor. It takes merely one second for the sensor to gather data on the acidity, temperature, and ion concentration of urine, saliva, or sweat. The data, once available, is uploaded to the cloud, allowing users to monitor their or their family's physical conditions though a smartphone.

This liquid testing technology developed by Professor Lin and his team can be applied to numerous areas, including elderly long-term care, quick medical screening, oral health, smart clothing that features physiological data collection, and water quality monitoring. According to Professor Lin and his team, "the testing is both fast and effective, and the results can be immediately displayed on a smartphone." Professor Lin noted that by integrating the technology into smart-water meters, people will be able to monitor home water quality by phone, thereby securing drinking water safety. In addition, the technology is excellent for agricultural, aquacultural, and river environmental monitoring. As for saliva testing, it is useful for preventing tooth decay and periodontal disease and for other oral care purposes.

養蝦不怕暴雨水濁 研發新型水下攝影機

海洋科學系特聘教授洪慶章與國家實驗研 究院共同研發「高解析度即時水下攝影 機」,即便在汙濁的水質環境中仍可「看 到」蝦子的生長狀況,進一步了解蝦子是 否受到病原體感染,讓養殖戶及早發現, 避兒損失。重大研究成果2016年獲國際知 名科學期刊《Scientific Reports》刊登。



污泥減重新技術 中山大學獨創 電脫水系統

環境工程研究所楊金鐘教授團隊提出不同 於傳統使用壓力過濾之處理方式,首創利 用電動力輔助壓力過濾之處理方式(簡 稱「電脫水技術」),成功地與二種板式 壓濾設備(板框式壓濾機及凹板式壓濾 機)結合並應用於有機污泥脫水,此新穎 的電脫水系統經由實測可將有機污泥含水 率大幅降低至約60%至65%,同時可減少 污泥餅體積30%至45%,並可降低污泥餅 中之塑化劑及部分污染物含量;因此,可 大幅降低約一半的污泥處理成本,並紓解 掩埋空間問題,對於污泥的再利用及環境 保護更是一大進展。

New Underwater Camera for Shrimp Farming that Works Submerged in Muddy Water Caused by Heavy Rains

Chin-Chang Hung, distinguished professor of the Department of Oceanography, collaborated with the National Applied Research Laboratories to develop his high-resolution realtime underwater camera for shrimp farmers to monitor the growth of shrimp in cloudy water. This important invention allowing early detection of shrimp infection by pathogens reduces economic losses and was reported in the worldrenowned scientific journal, Scientific Reports, in 2016.

New Sludge Reduction Technology Original Electric Dehydration System Designed at NSYSU

Professor Yang Chin-Chung of the Institute of Environmental Engineering proposed a processing method different from the conventional pressure filtration approach and pioneered the use of electric power-assisted pressure filtration, naming it as an "electric dehydration system" for short. This novel system successfully combines two types of plate filter press (plate and frame filter press and recessed plate filter press) and can be applied to organic sludge dehydration. The novel electric dehydration system can significantly reduce the water content of organic sludge to 60%-65%, sludge cake volume by 30%-45%, and content of plasticizer and some pollutants in sludge cake. Therefore, this approach can lower the cost of sludge treatment by approximately half and alleviate the problem of landfill space, thereby

constituting a major advance in sludge reuse and environmental protection.



加拿大維多利亞大學商學院提供 Photo courtesy of Peter B. Gustavson School of Business, University of Victoria, Canada

Global Connections 全球視野

本校持續拓展深化國際交流,過去一年新增12所海外 姊妹校,全球姊妹校共達186所,遍布38個國家,其中 本校與141所簽有交換學生協議,提供學生出國交流學 習機會。此外,每年約有700多名外籍生至本校短期交 流研習,各國文化在此交匯共融,締造國際化校園。

NSYSU has long been dedicated to expanding and deepening international exchange. Last year, the school had 12 more new sister schools, and in total 186 sister schools are located in 38 countries. Of these sister schools, 141 of them have signed student exchange agreements with NSYSU, opening up many overseas learning opportunities for NSYSU students. In addition, around 700 foreign students visit NSYSU for short-term academic exchanges each year, so NSYSU students can learn about different cultures, making the campus multicultural.



在與國際夥伴連結方面,本校教 師赴美國聖地牙哥加州大學參加 兩校雙邊研討會;陳陽益副校長 亦率團前進美國西雅圖,與當地 政府針對港口城市發展進行交 流,拓展雙邊產官學平台;李志 鵬總務長則代表參加比利時根特 大學200週年校慶及國際校長論 壇;為雙邊建立更緊密的夥伴關 係,擴大合作面向。

鑒於政府推動新南向政策,重新 定位我國在亞洲發展的角色,本 校積極爭取相關計畫,強化與東 協及南亞間之國際合作,包括於 菲律賓設置「臺灣教育中心」 及「區域經貿文化及產學資源中 心」、拓點招生、開設專班、舉 辦夏日學校、開設東南亞語課程 及推動工程領域學術聯盟等,期 能促進高等教育與人才培育之長 期合作發展。 In terms of forming international partnerships, our faculty members visited the University of California San Diego for a bilateral conference between two schools. NSYSU Senior Vice President Yang-Yih Chen led the delegation to Seattle, Washington for academic exchange on port city development and expansion of the industry-government-university platform between Taiwan and the United States. NSYSU Vice President for General Affairs Chih-Peng Li represented the school to attend the 200th anniversary celebration of Ghent University in Belgium and a forum for school presidents worldwide. These events enabled NSYSU to develop close international partnerships for extended cooperation.

Because of the government's New Southbound Policy and the need to reposition Taiwan's role in Asian development, NSYSU has worked to implement various projects and programs to strengthen cooperation with Association of Southeast Asian Nations (ASEAN) and South Asian countries. For example, NSYSU has established a Taiwan Education Center and a Regional Economic, Cultural, Industrial, and Academic Resource Center in the Philippines. NSYSU is also involved in recruiting personnel from various places, offering training programs, launching summer schools, providing Southeast Asian language courses, and promoting academic alliances in the engineering domain to facilitate long-term collaboration and development in higher education and personnel cultivation.



全球視野 Global Connections

亞太國際教育年會 52國學者熱議交流

本校主辦「2017亞太國際教育協會年會暨教 育展」(APAIE 2017),全球52國逾1,500 位專家學者共襄盛舉,並設有約240個展 覽攤位,為國內教育界規模最大的國際盛 會。參展單位橫遍歐、美、亞、非、大洋 洲等五大洲,包括來自世界各地的學界人 士、高等教育專業人士及政府單位等進行 交流並洽談如交換學生、海外實習、聯合 學位、跨區域學程、合作專案等各項合作 機會,促進國際間高等教育發展。

歐盟中心獲臺法文化獎

本校歐盟中心榮獲行政院文化部第20 屆「臺法文化獎」,為全國唯一獲獎的大 學單位。歐盟中心成立於2009年,長期關 注文化、藝術、服務、教學與研究等5個 領域,其中台歐大學生合作教學計畫,將 觸角延伸至小學及偏鄉弱勢兒童,特別受 到「臺法文化獎」終身秘書薩斐葉,達恪 思(XavierDarcos)讚譽。歐盟中心致力 於促進台灣與歐盟間文化交流成長,已成 為南台灣歐盟資訊的平台及歐洲學生深入 認識台灣的重要窗口。





Scholars from 52 Countries Engage in Education Discussion at APAIE

NSYSU head-hosted the Asia-Pacific Association for International Education (APAIE) Conference and Exhibition 2017, the largest international education event in Taiwan. The APAIE 2017 attracted over 1,500 participants from 52 countries and about 240 exhibition booth. International scholars and experts of higher education, and government sectors gathered for academic exchange and collaboration on student exchanges, overseas internships, and dual degrees, facilitating international higher education development.

NSYSU EU Centre Won the French-Taiwanese Cultural Foundation Award

The NSYSU European Union Centre won the 20th French-Taiwanese Cultural Foundation Award, and was the only university centre to win this award in Taiwan. Established in 2009, the centre is supported by the European Executive Council, with its focus on five main areas: culture, arts, service, teaching, and research. Xavier Darcos, perpetual secretary of the French-Taiwanese Cultural Foundation Award especially acknowledged the collaborative teaching project by Taiwanese-European university students, reaching out to elementary schools and minority students in remote and rural areas. The centre has become an information platform on the European Union for Southern Taiwan, and an important service window for European students to gain more understanding about Taiwan.



教育新南向 前進東南亞

為響應政府新南向政策,主任秘書蔡秀芬 率團參加教育部於馬來西亞舉辦的「2016 台灣高等教育展」,積極招收東南亞學 生。代表團更獨家訪問中鋼馬來西亞公 司,了解在地企業人才培育需求並規劃相 關課程。配合國家南進政策,對企業提供 專業技術培訓課程,以及長遠的人才培育 策略。未來規劃辦理大馬及東協地區經濟 政策菁英高階研習班,協助企業了解馬來 西亞及東協地區的產業經濟趨勢。

南向菲律賓 學研交流

國際處與東南亞研究中心前往菲律賓訪問 當地大學及智庫,就學者互訪、學生交 換、推動雙聯學位制度、辦理學研活動與 深化學術對話機制等達成多項共識。參訪 行程包括菲律賓國立大學地利門分校、馬 尼拉雅典耀大學、德拉薩大學、遠東大 學,及聖托馬斯大學。

New Southbound Policy for Education: Southeast Asia

Responding to the government's New Southbound Policy, NSYSU Chief Secretary Shiow-Fon Tsay led a delegation to the Ministry of Education's 2016 Taiwan Higher Education Fair in Malaysia, to recruit more students from Southeast Asia. The delegation also had the privilege of interviewing officers of CSC Steel SDN. BHD. to learn about local enterprises' needs in personnel cultivation so that NSYSU can develop courses appropriately. To support our country's New Southbound Policy, NSYSU in the near future will provide enterprises with professional technology training courses and long-term personnel cultivation strategies. NSYSU will also launch advanced seminar classes for high-level management to assist enterprises more thoroughly understand industrial and economic trends in Malaysia and ASEAN.

NSYSU Academic Exchange with the Philippines

Office of International Affairs and Center for Southeast Asian Studies formed a delegation and visited numerous



universities and think tanks in the Philippines to explore future possibilities in strengthening academic collaboration and interinstitutional exchange. The universities and institutes visited included University of the Philippines Diliman, Ateneo de Manila University, De La Salle University, Far Eastern University, Royal and Pontifical University of Santo Tomas.



本校與聖托馬斯大學締約

亞洲歷史最悠久、全球最大的天主教學校-菲律 賓聖托馬斯大學由副校長Rev. Fr. Richard G. Ang, O.P.率領該校研究生院一級主管來訪,並代表該 校與本校簽訂學術交流合約。雙方資源共享,促 進學生交換、教職員互訪進修,建立雙聯學位等 制度性合作,共同培育認識台灣、具台灣經驗的 學術人才,成為連接台灣經驗與菲律賓發展的橋 梁,台灣南向最重要的資產。

俄羅斯科學院 攜手中山探測海洋

俄羅斯歷史最悠久,規模最大的俄羅斯科學院希爾紹夫(P.P. Shirshov)海洋研究所,由副所長 Peter Zavialov代表與本校簽訂合作協議,雙方未 來將針對水下潛航器研發製造,及深海底床物搜 尋與撈取等相關工程技術切磋交流。本校將在四 年内投入新台幣兩千萬元進行大規模海下技術研 究及學生培育計畫,包括洋流發電深海錨定、探 勘「甲烷水合物(可燃冰)」、台灣海流變化監 測及水下文化資產發掘等雙方合作項目。

NSYSU and UST Signed MOU

NSYSU has signed an MOU of academic cooperation with the Pontifical and Royal University of Santo Tomas (UST), the oldest existing Catholic university in Asia. UST Vice-Rector Rev. Fr. Richard G. Ang, O.P. led UST administrators to visit NSYSU, and represented UST in signing the MOU. The cooperation will allow sharing of academic resources, facilitation of student exchanges, bilateral visits of faculties, and the establishment of dual degrees. NSYSU and UST will engage in collaboration to cultivate students with Taiwan experiences to serve the bridges between Taiwan and Philippines' development and become an important part in Taiwan's southbound policies.

NSYSU Joins Hands with IO RAS in Ocean Exploration

NSYSU signed an MOU with the P.P.Shirshov Institute of Oceanology of the Russian Academy of Sciences (IO RAS), signifying an initiation of international collaboration in underwater inspection instrument development, seafloor survey, and related technology exchanges. Peter Zavialo, Deputy Director represented IO RAS in signing the MOU. NSYSU will invest NTD 20 million in large scale underwater technology research and talent cultivation; areas including deep ocean current power generation, methane hydrate surveys, monitoring of current changes in Taiwan, and underwater cultural heritage discovery can be expected to become components of the collaboration.





亞太教育學會首次來台 25國學者參與

本校與亞太教育研究學會(Asia-Pacific Educational Research Association, APERA)共同舉 辦「2016亞太教育研究學會(APERA)暨台灣 教育研究學會(TERA)國際學術研討 會」(APERA-TERA 2016)。這是亞太教育研 究學會首次移師台灣舉辦國際研討會,以「未 來的烏托邦」(The Future Utopia)為題,探 討21世紀的教育革命,共25國學者參與,逾200 篇論文發表,促進學界的國際交流與合作,研 討會並安排與會學者訪問高雄市兩所小學,親 至教學現場與師生互動。



台灣邦交國布吉納法索 來台摘博士第一人

來自西非我邦交國布吉納法索的江德曼,2016 年取得中國與亞太區域研究所博士學位,成為 該國第一位獲得台灣博士學位的學生。江德曼 的博士論文題目為「中國大陸對非洲外援:以 安哥拉與尼日為例」,關注於中國大陸在亞太 區域的發展。來台7年的江德曼,畢業後任職於 本校亞太事務英語碩士學程,未來希望回國至 大學教書或是在外交部工作,並在布吉納法索 的大學裡成立亞太相關研究科系。

APERA's First Academic Conference in Taiwan with Scholars from 25 Countries

NSYSU and the Asia-Pacific Educational Research Association (APERA) cohosted the 2016 International Academic Conference of Asia-Pacific Educational Research Association and Taiwan Education Research Association (APERA-TERA 2016). This was the first APERA international conference in Taiwan. The theme of the conference, the Future Utopia, centered on educational revolution in the twenty-first century, and scholars and academics from 25 countries participated in this event, presenting more than 200 research papers for global academic exchange and collaboration. The conference also arranged for the participants to visit two elementary schools in Kaohsiung City to interact with students and teachers in the classroom.

First Student from Burkina Faso, Becomes Doctor of Philosophy in Taiwan

In 2016, Thiombiano Dramane Germain from Burkina Faso, a West African country with a formal relationship with Taiwan, received his Ph.D. from the Institute of China and Asia-Pacific Studies, becoming the first student from Burkina Faso to be awarded a Ph.D. from Taiwan. Mr. Germain's doctoral dissertation, titled China's Foreign Aid in Africa: The Case Studies of Angola and Niger, highlights Chinese-sponsored development in the Asia-Pacific region. Mr. Germain has lived in Taiwan for seven years and currently works for NSYSU's International Master Program in Asia-Pacific Affairs. In the future, Mr. Germain aspires to return to Burkina Faso to teach in university or to work for his country's foreign affairs ministry. His ultimate goal is to establish an Asia-Pacific-related department in a university in Burkina Faso.

全球視野 Global Connections

華語中心首辦 俄羅斯華語教師培訓

華語中心受台北莫斯科經濟文化協調委 員會駐莫斯科代表處委辦,首次辦理俄 羅斯華語教師來台研習課程。為期兩週 的研習課程涵蓋了理論與實務,透過數 位教學實作、戲劇教學及課堂觀摩等方 式,提供多樣化的課程内容。也安排台 灣歷史介紹、電影發展、台灣戲曲與皮 影戲等文化參訪與交流。

國際學生龍舟隊 勇奪10連霸

國際學生龍舟隊連續10年參加「高雄 愛河端午龍舟錦標賽」,2017年共組6 隊參加5項不同龍舟賽事組別,拿下1 金2銀2銅的好成績,成功在傳統龍舟 國際混合組項目保持10連霸紀錄。

Chinese Language Center's First Training Program for Chinese Teachers in Russia

Commissioned by the Representative Office in Moscow for the Taipei–Moscow Economic and Cultural Coordination Commission, the NSYSU Chinese Language Center hosted its first seminar course for Chinese teachers in Russia. This two-week course encompassed both theory and practice on a variety of topics, including hand-on digital teaching, drama teaching, and classroom observation. For cultural visits and exchange, NSYSU gave the participants an overview of the history of Taiwan and the development of the local film industry and introduced them to Taiwanese opera and shadow puppetry.

International Students Win Their 10th Dragon Boat-Racing Championship in a Row

NSYSU international students' dragon boat team has already participated in the Kaohsiung Love River Dragon Boat Competition for ten years in a row. In 2017, six NSYSU crews participated in five different divisions of the dragon boat competition. In addition to winning one gold medal, two silver medals, and two



bronze medals, they also won their 10th championship in a row at the traditional dragon boat competition for international teams, mixed division.



Expansion and Regional Networking 拓展與區域連結

本校位居大高雄區域教學與研究領導地位,與高雄醫學大學合作成 立「中山高醫攻頂大學聯盟」,近五年,已成為國内公私立大學實質合 作的典範。另各與高雄長庚紀念醫院、國防大學理工學院及高雄市立空 中大學簽訂聯盟,組成跨校研究團隊,開拓研發面向的寬廣度。本校將 持續與高雄市政府合作,整合民間資源,貢獻學術研究成果,引領區域 升級發展動能,創建社會經濟福祉。

NSYSU takes a leading position in delivering teaching and research in the Greater Kaohsiung area. The Aim-for-the-Top Alliance formed by NSYSU and Kaohsiung Medical University (KMU) has become a role model of substantive collaboration for public-private universities. NSYSU also established academic partnership with Kaohsiung Chang Gung Memorial Hospital, National Defense University Chung Cheng Institute of Technology (NDU CCIT), and Open University of Kaohsiung, to expand the breadth of research and development (R&D). NSYSU continues to cooperate with the Kaohsiung City Government to integrate private resources and contribute academic outcomes. We look forward to stimulating regional development and creating social and economic wellbeing.



聯盟高雄長庚醫院 醫學合作展新頁

本校近年發展生醫、 生技、海洋、資 訊诵信等特色 研究的跨域 整合,積極 貓 結 產 業 界,與高雄 長庚醫院合 組 策 略 聯 盟,雙方將在 學術研究、人才 培育、產學合作、 教學合作及國際合作等項 目,針對醫療生技、長期照護等領域 攜手努力。中山海洋天然物的研究成 果,具備研發治療藥物的潛力;與智 **崴資訊合作的虛擬實境成果,可用於** 解說病情,提升醫療品質。

海院攜手國防理工 海研領域跨校合作

海洋科學學院與國防大學理工學院簽 訂合作協議,雙方在學術資源共享、 合聘教師及指導研究生等面向建立教 學與研究合作關係。未來將加強海洋 科技基礎研究與應用研究,涵蓋水下 載具、水中通訊、追蹤技術、海洋測 繪、遙感探測、環境資訊及工程相關 之規劃設計及觀測、海洋天然物防腐 蝕與抗污損等領域,共同推升台灣海 洋科技的發展。

Alliance with Kaohsiung Chang Gung Memorial Hospital for Medical Collaboration

NSYSU has engaged in cross-disciplinary research areas on biomedicine, biotechnology, oceanology, and information communication through alliances with key players in these industries. For instance, the school has signed a strategic alliance agreement with Kaohsiung Chang Gung Memorial Hospital for collaboration in research, talent cultivation, academia-industry projects, teaching, and international projects on medical biotechnology and longterm care. NSYSU's research on marine natural products has demonstrated that these products have a good potential for medicine development. The school

has also collaborated with Brogent Technologies Inc. on virtual reality technology in hopes of applying the technology to explain diseases to patients and enhance medical quality.

College of Marine Sciences Signed a Cooperation Agreement with NDU CCIT

The collaboration between NSYSU and NDU will be based on resource sharing, joint faculty appointment, and joint graduate student supervision. The future calls for more researches in marine technology and applied research. The collaboration includes underwater inspection instruments, underwater communication, object tracking technology, hydrographic surveying, remote sensing, as well as atmospheric sciences, and anticorrosion and antifouling of the marine natural products. Both collaborative efforts hope to improve the development of marine technology in Taiwan.





南星產業樞紐 聯手中信台船 厚植船艦科技戰力

本校與中信造船集團、台灣國際造船股份有限公司 自2017年9月份新學期開始,共同開設「南星產業 樞紐學程」。學程內容以「設備系統科技」、「國 防科技」、「能源科技」及「船艦工程」等國家產 業發展專業為主;學生修課畢業後,除可優先進入 企業的研發單位如「台船潛艦發展中心」及「中 信造船研發中心」任職,畢業前一年還可申請由 校方募款成立的獎助學金,有機會獲得全額補助 至國外交換學習半年。

攻頂聯盟合作成果發表 互補雙贏成果吸睛

本校與高醫兩校自2012年合作迄今,每年共同發 表的論文數量,皆有10%的成長率,2016年共合 作發表274篇論文。2016年攻頂大學聯盟合作計 畫成果研討會,研究主題包括新藥開發、轉譯醫 學、醫學工程、臨床醫學、醫療器材、環境醫 學、醫療管理等50項研發成果,並頒發合作研究 優秀獎6名,包括中山大學化學系教授謝建台、 資訊管理學系教授吳仁和、機械與機電工程學系 教授朱訓鵬、高雄醫學大學生物科技系教授李景 欽、醫學影像暨放射科學系教授田育彰及醫學研 究所教授蔡英美。

Southern Star Industry Hub Program Building Ship Technology Competitiveness

NSYSU, Jong Shyn Shipbuilding Co., Ltd., and CSBC Corp. Taiwan jointly developed the Southern Star Industry Hub Program, which will be available in fall semester, 2017. The program focuses on equipment system technology, national defense technology, energy technology, marine engineering, and other state industry development projects. The CSBC Ship Development Center and Jong Shyn Shipbuilding Research and Development Center will grant preferential hiring to students completing the program. Moreover, a year before students complete the program, they can apply for a fully funded NSYSU scholarship to study abroad for half a year as an exchange student.

The Aim-for-the-Top Alliance Joint Researches Bring Win-win Results

Since the Aim-for-the-Top Alliance formed in 2012, NSYSU and KMU have appreciated a 10% annual growth rate of co-published papers. In 2016 the two jointly published 274 articles. In the 2016 Research Outcome Seminar, research subjects among 50 R & D results included new drug development, translation medicine, medical engineering, clinical medicine, medical equipment, environmental medicine, and medical management. Cooperative Research Excellence Awards were awarded to Professor Jentaie Shiea of NSYSU Department of Chemistry, Professor Shin-Pon Ju of NSYSU Department of Mechanical and Electro-Mechanical Engineering, Professor Jen-her Wu of NSYSU Department of Information Management, Professor Jin-Ching Lee of KMU Biotechnology, Professor Yu-Chang Tyan of KMU Department of Medical Imaging and Radiological Sciences, and Professor Eing-Mei Tsai of KMU Graduate Institute of Medicine.



臺綜大四校競技 風帆揭幕展西灣風情

臺灣綜合大學系統舉辦第12屆「正興城灣 盃」聯誼交流競技,本校與成功大學、中正大 學及中興大學四校教職員生約1,400名選手齊 聚西子灣,展開為期兩天的競技比賽。打破以 往慣例,開幕儀式由四校代表搭乘雷射型帆 船,於西子灣海域乘風破浪。此次四校競技項 目包含射箭、圍棋、劍道、排球及游泳等,共 18場次,另有學生獨木舟和教職員麻將表演 賽並首設「師生飛鏢競技」友誼賽。四校競技最 後由成功大學獲得總成績冠軍,中山大學拿下亞 軍,中興大學及中正大學分居第三、四名。

擁抱the earth 大學生月省3千塑膠袋

為關心地球上的環境、社會議題,透過彼此的 力量來改變環境、擁抱地球。以The Earth的諧 音,企業管理學系西灣學人團隊發起「擁抱里 二」計畫,採行塑膠袋減量使用可換集點的方 式,與哈瑪星社區近四十家餐飲業者合作,疾 呼環保意識;實行一個多月獲百名學生響應, 省下的塑膠袋超過三千個,成果斐然。





Opening the 12th CHCW Cup with Sailing at Sizihwan

Taiwan Comprehensive University System held the12th CHCW Cup, a friendship oriented competition, and a total of 1,400 students, staff, and faculty of NSYSU, National Cheng Kung University (NCKU), National Chung Cheng University (NCCU), and National Chung Hsing University (NCHU) gathered at Sizihwan for this two-day athletic event. Unlike previous events, at this year's opening ceremony, representatives from the four schools rode laser sailboats at Sizihwan. Aside from the 18 athletic events including archery, Go, kendo, volleyball, and swimming, there were also students' canoe exhibition games and staff and faculty Mahjong exhibition games. In addition, a friendly match of darts for students and faculty was added to the program. In the end, NCKU won the championship overall, NSYSU emerged as the runner-up, and NCHU and NCCU were third and fourth, respectively.

Embracing the Earth: College Students Save 3,000 Plastic Bags in a Month

Aside from paying attention to environmental and social issues, taking action and working together to change the environment and protect the Earth are vital. Seawoun Sharer of the Department of Business Administration initiated a project called Embrace the Earth in which a bonus point reward system was adopted to encourage people to reduce plastic bag usage. Around 40 food-service businesses in Hamasen Community and hundreds of students participated in this environmental awareness project. Over slightly more than a month, more than 3,000 plastic bags were saved. An inspiring result!

拓展與區域連結 Expansion and Regional Networking



「光」有知識還不GO 科工館光學揭密

國際光電工程學會中山學生分會與國立 科學工藝博物館合辦科學教育活動,讓 小朋友動手操作並且觀察光學現象。 SPIE致力於光學推廣,中山分會已舉辦 過多次科普性活動,將光學融合小遊戲, 活化課本上教的光學知識,演示光學實 驗,讓高中生親自動手觀察與操作, SPIE中山分會藉由和不同單位合作,舉 辦各種光學活動,和民衆分享生活中常見 的光學現象,一起體驗光學的神秘之處。

技工漫步節 再造旗鼓鹽

教學課程結合在地特色,社會系「空間 政治與社區設計課程」針對旗津、鼓山 及鹽埕區沒落空間進行再造設計。繼 2015年成功改造旗津廢棄海軍技工宿舍 為舢舨文化保存中心後,社會系師生將 空間政治與社區設計的觸角,擴大到新 濱哈瑪星,並發起「技工漫步節」活 動,展示學生空間活化創作。成果展延 續旗津技工舍的自幹精神,讓學生先觀 察城市中的閒置空間,接著思考空間閒 置的原因,最後與社區居民一同進行空 間改造,將學習及觀察深入在地。

National Science and Technology Museum Reveals the Secret of Light

The International Society for Optics and Photonics (SPIE) and the NSYSU Student Branch and the National Science and Technology Museum jointly held a science and education fair for kids to try various hand-on optical experiments and to observe many optical phenomena. SPIE is dedicated to disseminating optical knowledge, while the NSYSU Student Branch has hosted numerous popular science events, using games to introduce optics to high school students. Students in these events were encouraged to apply optical knowledge they had learned from their textbooks to optical experiments. The SPIE NSYSU Branch has collaborated with many divisions and agencies in launching optical activities to teach the public about common optical phenomena and present the mystery of optics.

Craftsmanship Festival: Rebuilding Cijin, Gushan, and Yancheng

Aiming to add local features to school learning, the Department of Sociology offered a course: Spatial Politics and Community Design to redesign the declining neighborhood in Cijin, Gushan, and Yancheng districts. This course followed a gentrification project which successfully transformed a deserted Craftsmanship House in Cijin District into a sampan cultural center in 2015. The instructor and the students not also applied spatial politics and community design to Xinbin Hamasen in Cijin but also initiated the Craftsmanship Festival to exhibit students' spatial vitalization work. The exhibition conveyed the spirit of Chijin Craftsmanship House—Do it Together. The students first observed unused spaces in the city, and next, they analyzed why the spaces were unused. Afterward, they worked together with residents to renovate the spaces, putting what they have learned and observed into practice to help local communities.




Alumni Contributions 校友貢獻

中山大學自1980年建校37年以來,培育無數社會菁英與人才,至 今校友已超過5萬5千多人。為加強校友服務,串連校友網絡,建立 與學校間的橋梁,2014年成立「校友服務中心」,以「西子樓」校 友會館為基地,積極展開校友聯繫與服務。2015年底由校友捐贈修 建的「台北逸仙會館」竣工並揭牌營運,成為中山人台北的家。此 外,澳門校友會於2015年10月成立,為馬來西亞校友會之後的第 二個海外校友會。

For 37 years of devotion to cultivating talented professionals who now form the backbone of society since its establishment in 1980, NSYSU now has more than 55,000 alumni worldwide. To serve our alumni, to expand our alumni network, and to create a bilateral school–alumni connection, the NSYSU Alumni Service Center, based in the Sizih Building, also known as the alumni building, was established in 2014. By the end of 2015, the construction of the Taipei Yat-sen Building, sponsored by NSYSU alumni, was completed and inaugurated to serve NSYSU alumni in Taipei. In October 2015, the Macao NSYSU Alumni Association was established, becoming the second overseas alumni association of NSYSU, following the Malaysia NSYSU Alumni Association.





鄭英耀校長上任後,將校友服務列 為校務發展重點之一,2017年2 月「校友服務中心」改制為一級單 位,分設校友聯絡及募款推動二 組,期建置更縝密的校友服務聯絡 網,以凝聚校友資源,發揮「中山 人、一家人」的力量。在「校友服 務中心」與「國立中山大學校友總 會」合力推動下,各地區校友會已 成為中山人資訊交流與西灣回憶之 平台,2017年2月成立香港校友 會,新竹市校友會也積極籌備中。 NSYSU President Cheng Ying-yao has made alumni services one of his priorities in school management. In February 2017, the Alumni Service Center was upgraded to a first-level unit, while the Alumni Contact Division and the Fundraising Division were established under the Alumni Service Center to build an effective alumni service and contact network pooling alumni resources and facilitating alumni collaboration and interaction. Jointly promoted by the Alumni Service Center and the NSYSU General Alumni Association, an alumni information and social exchange platform was established by our alumni all over the world. After establishing our Hong Kong NSYSU Alumni Association in February 2017, we are currently working on a Hsinchu alumni association.

105學年度傑出校友 (2016-2017)

姓名	畢業系級	畢業年度	當選類別
李健逢	生物醫學研究所博士班	2009	學術卓越
吳朝榮	海洋科學系(前海洋地質及化學研究所)碩士班	1988	學術卓越
林奕彰	電機工程學系學士班	1985	工商菁英
陳建榮	高階經營碩士學程在職專班(EMBA)	2010	工商菁英
黃昭順	高階經營碩士學程在職專班(EMBA)	2004	社會服務
吳宏謀	海洋環境及工程學系博士班	2014	社會服務
吳鈞堯	財務管理學系學士班	1993	文化藝術

2016 Outstanding Alumni Awards

Name	Graduation Department / Institute	Award Categories
Chien-Feng Li	Institute of Biomedical Sciences, Ph.D., 2009	Academic Achievement
Chau-Ron Wu	Department of Oceanography (formerly the Institute of Marine Geology and Chemistry), MS, 1988	Academic Achievement
John Lin	Department of Electrical Engineering, BS, 1985	Industry and Commerce Achievement
Chien-Jung Chen	Executive Master in Business Administration(EMBA), MBA, 2010	Industry and Commerce Achievement
Chao-Shun Huang	Executive Master in Business Administration(EMBA), MBA, 2004	Public Service
Hong-Mo Wu	Department of Marine Environment and Engineering, Ph.D., 2014	Public Service
Jun-Yao Wu	Department of Finance, BBA, 1993	Culture and Arts





校友第一人 謝進南獲頒名譽博士

管理學院高階經營碩士在職專 班(EMBA)第二屆校友、龍慶 鋼鐵股份有限公司董事長謝 進南獲頒名譽博士學位。謝 博士長期關心校園建設與 發展,樹立畢業校友與母 校互動的典範,成為第一 位獲此殊榮的中山校友。 謝博士自中山EMBA畢業將 近20年,對於中山大學的關 懷與投入從不間斷,曾任中山校 友總會理事長,創立中山大學高雄校 友會、中山大學傑出校友聯誼會,並且兩次 擔任校長遴選委員會委員。

First Alumni Entrepreneur Chin-Nan Hsieh Awarded Honorary Degree

Dr. Chin-Nan Hsieh, the chairman of Lung Ching Steel Enterprise CO., LTD., and a recipient of NSYSU Outstanding Alumni Award, was conferred the NSYSU honorary doctorate degree. Hsieh graduated from EMBA program nearly 20 years ago with a long history of supporting to the University's physical development. He is the first NSYSU alumnus to accept this honor, setting up the role model for alumni. Hsieh previously served as the President of the NSYSU Alumni Asso-

ciation, established the Kaohsiung NSYSU Alumni Association and NSYSU Outstanding Alumni Association. He also twice served as a member of NSYSU President Selection Committee.

乘風萬里獎學金 助弱勢生出國進修圓夢

為培育弱勢學生國際視野,成立「乘風萬里 ·轉動人生」獎學金,企業、校友、社會人 士及師長等熱心捐贈上千萬元,資助中、低 收入戶及特殊境遇家庭等成績優秀學生,提 供全程機票、學費及生活費,赴海外交換、 實習或擔任國際志工,讓優秀清寒學子無後 顧之憂,發揮潛能行萬里路,追求夢想翻轉 人生,每年將有約50名學生受惠。



NSYSU Scholarship Fundraising for Disadvantaged Students Studying Abroad

After establishing a scholarship for disadvantaged students to study overseas and expand their global horizons, the school has received tens of millions in New Taiwan dollars from companies, the public, NSYSU alumni, faculty members, and staff wishing to financially support academically successful students from medium-and

> low-income families and vulnerable families to participate in overseas exchanges, internship programs, and international volunteer programs. Each scholarship winner will have their airfares, tuition fees, and living expenses fully covered by this scholarship, so they can concentrate on acquiring overseas experiences, realizing their potentials, and pursuing their goals. Each year, about 50 students will benefit from this scholarship.

校友貢獻 Alumni Contributions



中山女排清寒生奪冠 感念舊振南贊助圓夢

女子排球校隊擊敗中國大陸、台灣、香 港、澳門等隊勇奪「2017昆明兩岸四地 男女排球邀請賽」冠軍。隊員中有清寒學 生,在「女排運動獎學金」的支持下,無 後顧之憂出國參賽。該獎學金由傑出校 友、舊振南食品公司董事長李雄慶贊助, 為全國第一個企業捐贈的體育入學獎學 金。一年共超過60萬元的捐款,加上學 校每年固定編列約135萬元的體育類獎金, 招收國内具排球專長的優秀選手為校爭 光,同時與課業並重,未來能回饋社會。

企業家校友挺南進 捐贈東南亞獎助學金

為培育優秀海外人才,由校友捐款設立東 南亞獎助學金,每年提供40萬元獎助來 自越南、馬來西亞、印尼、菲律賓、泰國 及緬甸等六國學生。「謝明錢先生東南亞 獎助學金」由校友企業家、凡愛國際股份 有限公司執行董事謝育仁捐贈。結合校友 企業和學校的力量,此獎學金不僅可引介 東南亞學生在母國的台灣企業工作,使學 生學有所用,更能落實企業南向政策。

Jiu Zhen Nan's Sponsorships Appreciated by Championship-winning NSYSU Women's Volleyball Team Members

NSYSU Women's Volleyball Team beat opponents from China, Taiwan, Hong Kong, and Macao and won the 2017 Kunming Cross-Strait Four-Region Volleyball Tournament. Students under the poverty line in the NSYSU Women's Volleyball Team had their trips overseas to tournaments financially supported by the Women's Volley Ball Athletic Scholarship. This Scholarship is sponsored by the president of Jiu Zhen Nan Taiwan Pastry, Hsiung-ching Li, who is also an outstanding alumnus of NSYSU. In fact, this scholarship is the first enterprise-supported athletic entrance scholarships with more than NT\$600,000 each year. The scholarship plus the school's annual athletic scholarship budget of NT\$1.35 million have enabled NSYSU to recruit elite volleyball players to represent NSYSU at various tournaments and to pursue academic achievement.

NSYSU Alumni Supporting the School's Southeast Asia Scholarship

To cultivate talented people from overseas, NSYSU has set up the Southeast Asia Scholarship to sponsor students from six Southeast Asian Countries, namely Vietnam, Malaysia, Indonesia, the Philippines, Thailand, and Myanmar, with a total of NT\$400,000 a year. The Hsieh Ming-Chien Southeast Asia Scholarship, a gift from EMBA alumnus Yu-jen Hsieh, the CEO of H2 Biotech Inc. This scholarship not only enables students from Southeast Asian countries to be recruited to work for Taiwanese companies in their home countries but also support Taiwan's New Southbound Policy for enterprises.



國家圖書館出版品預行編目(CIP)資料

國立中山大學年報,2016-17/蔡秀芬等編輯.一	_
高雄市:中山大學,民106.10	
面:公分	
ISBN 978-957-9014-74-8(平裝)	
1. 期刊	
051 10601769	1

國立中山大學年報,2016-17

發 行	人	鄭英耀
出	版	國立中山大學
策	劃	秘書室公共事務組
編	輯	蔡秀芬 蔡璦琪 鄭怡軒 劉科汶
發行地	地	高雄市鼓山區蓮海路70號
電	話	07-5252000 分機 2730 . 2731 . 2732
發行E	期	民國一〇六年十月
Publis	her	Ying-Yao Cheng

Publisher	Ying-Yao Cheng
Distribution	National Sun Yat-sen University
Planning	Public Affairs Division, Office of Secretariat
Editors	Shiow-Fon Tsay, Amy Tsai
	Yi-Hsuan Cheng, Ke-Wun Liu

Address Tel. Issue date No. 70, Lienhai Rd., Kaohsiung 80424, Taiwan, R.O.C. + 886 7 5252000 Ext. 2730, 2731, 2732 October 2016

特別感謝照片提供: 海工系99級林肯迪(P.8) 王錦河先生(P.50) 加拿大維多利亞大學商學院(P.56-57) (Peter B. Gustavson School of Business, University of Victoria, Canada) 高雄市政府都市發展局「K720空間影像網」(P.64-65) 文書組王韋臻先生(本頁)







國立中山大學 National Sun Yat-sen University 804高雄市鼓山區蓮海路70號 70 Lienhai Rd., Kaohsiung 80424, Taiwan, R.O.C. Tel:+886-7-5252000 http://www.nsysu.edu.tw

