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HIGHLIGHTS

NTU Hospital Celebrates 120 Years of Medical Dedication

Smart Cars Demo Paints High-Tech Future

NTUtopia Boosts Social Causes

Prehistoric Super Earthquakes Revealed

Special Report

Coast-to-Coast Academic Networking



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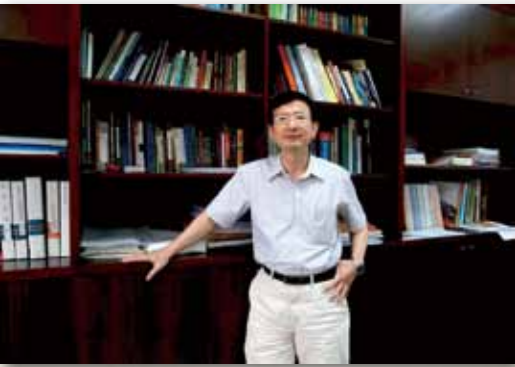
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Vice President for Research and Development

FANG-JEN LEE

Whether it's fields in the basic sciences or those related to applied sciences, NTU has consistently produced outstanding achievements. NTU scientists investigating such fields as medicine, physics, oceanography, atmospheric science, and geology, fields in the basic sciences that are based on academic research, have amassed substantial academic accomplishments.

NTU's performance in fields of applied sciences, which emphasize academia-industry cooperation, matches the high standards set by the superlative research we are producing in the basic sciences. Research and development conducted at the College of Medicine, for instance, has led to the creation of world-class cancer-fighting pharmaceuticals, cancer detection systems, and remote treatment equipment. In addition, a team of students has founded a 3D printing startup company, while the Department of Electrical Engineering has enjoyed a stable, long-term cooperative relationship with the world-renowned Intel Corp. All in all, from basic sciences to applied sciences, NTU has generated an endless stream of exceptional R&D achievements, and we continue develop these accomplishments in order to advance the wellbeing of humanity.

Our research across all fields continues unabated. We at the Office of Research and Development encourage faculty members and students to pursue world-class startup R&D. We call on them to take advantage of NTU's leading academic position in Taiwan so as to produce the world's most top-notch R&D. We also hope that work is carried out in all disciplines using a model in which teams work under the leadership of senior faculty members. This approach enables junior professors and students to give expression to their creativity, while allowing the senior team leaders to pass on their years of experience to future generations by using their deep academic knowledge to help the junior faculty members and students.

Interdisciplinary research and integration are a major aspect of startup and R&D endeavors at NTU. One of the university's greatest advantages is that it comprises eleven colleges. I look forward to R&D teams from different disciplines working together, because a great deal of research can be completed only by integrating knowledge and skills from a variety of fields. The era of focusing solely on a single discipline has passed. The present times are marked by a massive explosion of information, and we must bring together the world's knowledge in order to understand and overcome problems and to create a new model for team-oriented interdisciplinary R&D.

I have always believed that our enrollment of so many international students has been a wonderfully beneficial thing for both these students from abroad as well as NTU. Working with NTU's outstanding faculty and student body, international students are able to develop their own scholastic abilities. As they gain an understanding of the lifestyle and culture of Taiwan, I encourage international students to also learn about Taiwan's academic research accomplishments while at NTU and to integrate these achievements into their own research interests. When they return to their home countries, NTU's international graduates can apply the knowledge they have gained while maintaining ties with NTU. These graduates serve as a bridge between business and academic communities in Taiwan and other countries and become part of an international research network. I believe that these types of international learning opportunities and experiences are among NTU's most vital assets.

OFFICIALS PURSUE INTERNATIONAL COOPERATION FROM SILICON VALLEY TO CAMBRIDGE, MASS.

A delegation of high-level NTU officials traveled from the West Coast to the East Coast of the United States in pursuit of opportunities to network with the international community and discuss innovative models for cooperation with elite NTU partner universities and research institutions in June. Headed by Executive Vice President for Academics and Research Liang-Gee Chen, the group included Vice President for International Affairs Luisa Shu-Ying Chang and the Office of International Affairs' Director for Global Alliances Linda Chang. Their mission was guided by the understanding that establishing cooperation with a network of international partners can help to augment the impact of the innovative work being undertaken in technology as well as the arts and humanities here at NTU.

The delegation's first stop was Silicon Valley on the US West Coast, where they visited two thriving technology companies established by Taiwanese businesspeople as well as the cutting-edge Singularity University. While visiting the two companies, Supermicro and Lilee Systems, the NTU officials gained a visceral sense that, even when confronting the din of improbability, those who muster the determination to fully realize their potential can discover limitless possibilities for development.

During the 1990s, an era marked by a general lack of optimism in the motherboard sector, Supermicro's founder realized that green energy computing solutions would become a market trend. Consequently, he went to the mecca of technology and established a company that would go on to find success in designing and manufacturing energy-conserving motherboards.

Founded in 2009, Lilee Systems developed the widely researched technology of software-defined radio to design positive train control systems for the railroad industry. Starting from tiny circuit boards, the company now supplies PTC systems to 70% of the railroad companies in the US.

Singularity University is not a traditional institution of higher learning. Instead of simply aiming to impart knowledge, the university confronts its students with the world's problems and challenges them to

adopt broad perspectives in innovating solutions. Its students are also far from the average university student. Spanning an age range of 19 to over 60 and covering an extensive breadth of professional knowledge, they share a common trait: a strong desire to solve the world's problems and a drive to put their ideas into action.

In 2014, NTU alumnus Dr. Ju-Chun Ko, who created the social networking apps Linkwish and SBACE.IO, became the first Taiwanese to gain admission to Singularity University. In another first, two Taiwanese students are attending the university's ten-week Graduate Studies Program this summer. During the delegation's visit to Singularity, Vice President Chen held a meeting with the graduate program's vice president of operations and managing director Ross Shott and manager Regina Njima during which he expressed his hope to organize a related program in Taiwan.



► Executive Vice President for Academics and Research Chen and Vice President for International Affairs Chang prepare to visit the Harvard Innovation Lab.

Special Report



▲ The NTU delegation meets with Dean Diana Sorensen and other professors at Harvard's Arts and Humanities Division.

After completing their schedule in Silicon Valley, the NTU administrators boarded a redeye flight to Cambridge, Massachusetts on the East Coast where they visited the Harvard University Arts and Humanities Division, Harvard-Yenching Institute, Harvard Innovation Lab, and Cambridge Innovation Center. While in Cambridge, Vice President Chen also attended the annual meeting of MIT's Computer Science and Artificial Intelligence Laboratory Alliance Program.

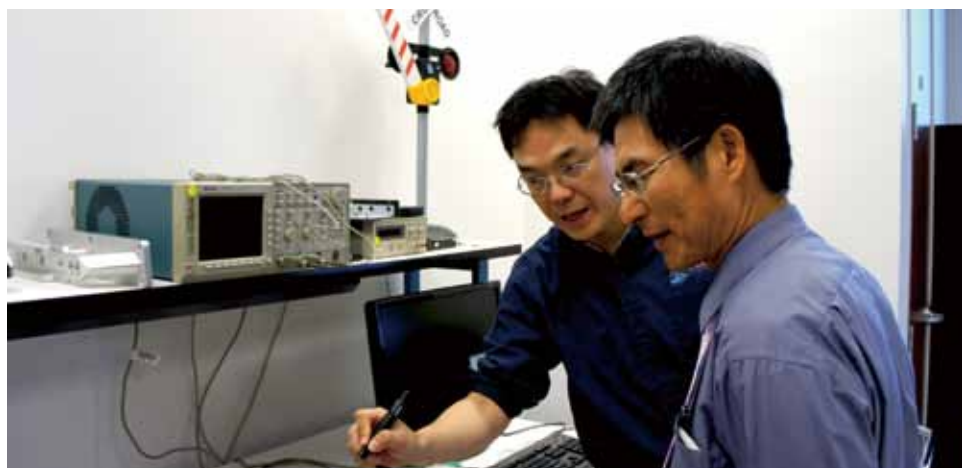
At Harvard, the NTU delegation met with Dean for the Arts and Humanities Diana Sorensen, Pulitzer Prize-winning professor Stephen Greenblatt, Chair of the Department of Comparative Literature David Damrosch,

and Director of the Fairbank Center for Chinese Studies Mark Elliott.

During the meeting, the Harvard professors pointed out that only a relatively small number of Taiwanese students have applied to the Arts and Humanities Division in recent years, and expressed their hope to encourage more students from Taiwan to explore the arts and humanities at Harvard. As to possible reasons for the low number of applications, the suggestion was made that potential applicants from Taiwan perhaps need to boost their confidence and enthusiasm and work harder.



▼ Executive Vice President Chen checks out the software-defined radio technology Lilee Systems developed for the railroad industry.



NTU GARAGE STARTUP RAISES USD 2.6 MILLION IN VENTURE CAPITAL

Another story of success is in the making at NTU Garage, home to our innovative campus entrepreneurs and startup teams. The startup Loopd, which has developed a data analysis platform that provides organizers of marketing events and conferences with valuable analytic data for optimizing the design of their events, completed its Series A round of venture capital financing in April by attracting USD 1.5 million. This good news follows the success enjoyed by FLUX 3D Printing, another NTU Garage startup, at raising USD 1.64 million in crowdfunding through KickStarter.

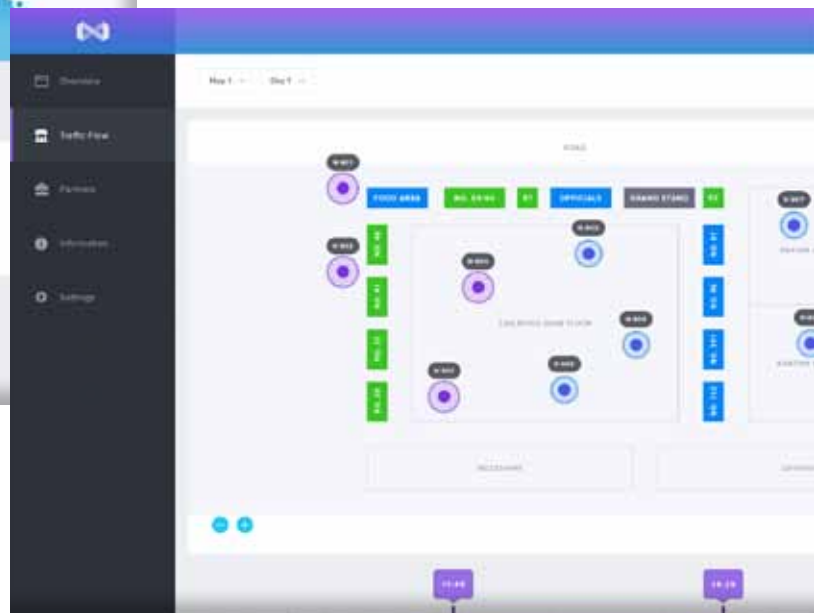
Loopd attracted a number of influential investors in this round of financing, including Salesforce.com CEO Marc Benioff, renowned Silicon Valley investor Tim Draper, and the Taiwan-based Mesh Ventures. Loopd will apply the financing toward developing analytic systems more compatible with market demands and offering more abundant functions, strengthening its sales force, accelerating sales, developing new market opportunities. Having already raised USD 1.1 million in seed funding in the fall of 2014, the startup has gained a total of USD 2.6 million in financing.

Loopd's platform provides events organizers with valuable information, such as the degree of interaction between participants, the lengths



of their visits, number of return visits, and the routes they follow through the venue. Combining a wearable bluetooth badge with a mobile application, the platform also enables attendees to perform such interactive tasks as exchanging contact information, collecting promotional materials offered by exhibitors, and signing in to conference events.

Loopd was established in September 2013. Currently, its team includes ten members, with its sales and marketing personnel located in San Francisco and its software engineers based here on campus at NTU Garage.





▲ NTU Hospital officials pose for a group photo at the opening of an exhibition celebrating the hospital's 120th anniversary.

NTU HOSPITAL HOLDS EXHIBITION MARKING 120TH ANNIVERSARY

NTU Hospital held an exhibition from June 18 to July 31 to mark the 120th anniversary of the founding of its earliest predecessor, Imperial Japan Taiwan Hospital, in June 1895. The exhibition highlighted the developments and medical advances at the hospital over the last six score years, and provided an opportunity for the public to learn more about the hospital's past, present, and future.

When Japan commenced its official occupation of Taiwan in 1896, the empire had lost 4,806 soldiers, 164 in battle and 4,642 to disease, mostly malaria. Due to its fear of Taiwan's tropical diseases, the Japanese government set about building the hospital into the largest one in Southeast Asia.

When NTU Hospital's forerunner first opened on Chian Chiou Street in the Dadaocheng

district of what is now Taipei City, it featured internal medicine and surgical departments and a staff of ten doctors, nine pharmacists, and 20 nurses. Following several name changes, the hospital was formally named the Office of the Governor-General of Taiwan Taihoku Hospital in 1898, and was relocated to its present location in July of that year.

The milestones of the hospital's development closely mirror the history of medicine in Taiwan. During that period, medical treatment and public health in Taiwan advanced from a traditional folk approach to that of a modern nation, that is, from crude and simple medical treatments to advanced medical research and development, and later from a self-pay system to the implementation of National Health Insurance.

The NTU Hospital of today is a comprehensive medical system including the main hospital, five branch hospitals, and a children's hospital. Offering a full spectrum of specializations, the hospital operates 26 medical departments and 12 medical support departments as well as four teaching and research divisions and eight administrative departments. It employs more than 1,100 doctors, nearly 2,800 nurses, and over 200 pharmacists.





PRESIDENT YANG ATTENDS APRU PRESIDENTS MEETING AT OSAKA UNIVERSITY

▲ NTU President Pan-Chyr Yang (rear row, second from left) joins other university representatives for a group photo during this year's Annual Presidents Meeting of the Association of Pacific Rim Universities at Osaka University.

This year's Annual Presidents Meeting of the Association of Pacific Rim Universities took place at Osaka University in Japan from June 28 to June 30. NTU President Pan-Chyr Yang led Vice President for International Affairs Luisa Shu-Ying Chang and the OIA's Senior Manager for International Organizations IlunTeng in representing NTU at the conference.

During the meeting, it was announced that NTU would host the APRU Presidents Meeting in Taiwan in 2018. This is especially exciting news, as 2018 will be the year we celebrate the 90th anniversary of NTU's founding.

Now in its 19th year, the APRU meeting is one of the major international events for institutions of higher education in the Asia Pacific region. This year, 25 university presidents and 76 university representatives attended, representing 37 APRU members, including the University of California, Los Angeles, Kyoto University, Seoul National University, and the University of New South Wales.

The conference commenced with a series of presentations on the current state of higher education in Japan from the perspectives of academia, industry, and government. The influential speakers included a deputy minister of Japan's Ministry of Education, Culture, Sports, Science and Technology, the president of the Science Council of Japan,

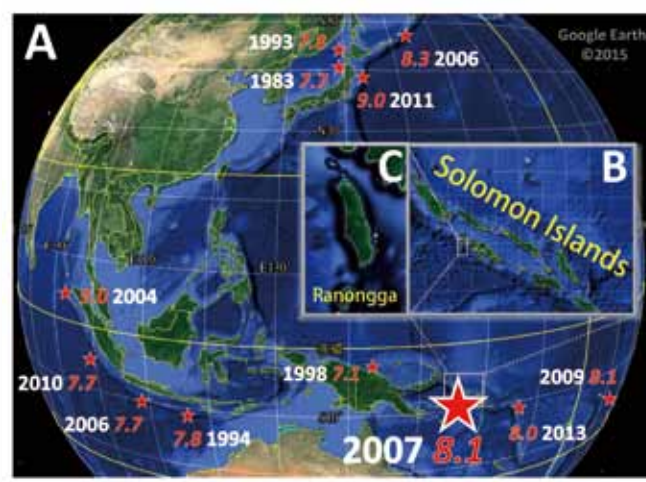
the chairperson and CEO Hitachi, Ltd., as well as the presidents of several leading Japanese universities.

Later, addressing the association's international relations, the president of University of Hong Kong spoke of ways in which APRU members could promote the HeforShe gender equality campaign run by UN Women, while the president of Russia's Far Eastern Federal University discussed strategies for taking advantage of APEC to expand APRU's international impact.

While at Osaka University, President Yang's delegation joined the other APRU guests in learning about OU's history, international exchanges, research, and industry-academia cooperation, and visiting some of its state-of-the-art research facilities. They also gained an appreciation for Osaka's local heritage by attending a performance by a Bunraku puppet theater troupe.

Geologists Dates Coral Fossils to Reveal Prehistoric Super Earthquakes

Dr. Chuan-Chou Shen, a distinguished professor of the Department of Geology, played a vital role as a member of an international team of geologists that published a study introducing a novel approach to measuring the occurrence of prehistoric super earthquakes in the renowned journal *Nature Communications* on June 30.



▲ Numerous tsunamigenic earthquakes have occurred around Solomon Islands in recent decades.

In the article, the team demonstrates that seismologists can look to the ages of intertidal coral fossils in order to reveal when massive tsunamigenic earthquakes happened over the past four thousand years in the western Solomon Islands.

Working at NTU's High-Precision Mass Spectrometry and Environment Change Laboratory (HISPEC), where he is director, Dr. Shen used a radiometric method called uranium-thorium dating to pinpoint the ages of coral fossils collected by the team to an accuracy of ± 11 months. Team members from the University of Texas at Austin had gathered the fossils from intertidal coral zones during two expeditions to Ranongga Island of the western Solomon Islands 2012.

The ages of the coral fossils provided by Dr. Shen indicate that at least four tsunami-producing super earthquakes have rocked Ranongga Island over the last four thousand years, with the most recent one happening around 750 years ago. Although the team discovered that such an earthquake has occurred once every 500 to 1,000 years, its current dataset suggests an absence of clear periodicity.

The local tectonic uplifts induced by these tsunamigenic earthquakes ranged from two to three meters, reshaping the earth's surface each time. Each of these ancient upheavals exceeded the 1.8-meter tectonic rise produced by an 8.1 magnitude earthquake in 2007. The study shows the western Solomon Islands has experienced far larger tsunamigenic earthquakes than the 2007 seismic event, which triggered a tsunami that reached a height of 12 meters, killing more than 50 people.



▲ Solomon Islands' island of Ranongga appears shrouded in clouds.

INTERNATIONAL COMPANIONS PROMOTE CULTURAL AWARENESS TO YOUNG STUDENTS



thousand school students took part in the program, and each local and international NTU student received a certificate of completion.

Coupled with their local partners, the international companions spent around two weeks designing visual presentations depicting their native cultures. Over the course of the following three weeks, each pair of students was placed in classrooms at Long An Elementary School and Long Men Junior High School, giving the international students the opportunity to share their cultures face to face with the young students.

The international students also prepared fun cultural games and activities that actively involved their students. Most of the presentations were conducted in English in order to encourage the school students to practice speaking and listening.

Encouraged by the success of the pilot program, which received funding from the Ministry of Education, the Office of International Affairs has decided to expand the International Companions for Learning program to other regions around Taiwan this September. International students interested in sharing their cultures with local Taiwanese students and in learning about Taiwan's local culture from them are invited to visit the International Companions for Learning Facebook page for more information.

The Office of International Affairs joined forces with the NTU International Student Information Service this spring to create a pilot program called International Companions for Learning. Designed to promote cultural awareness in Taiwan's school system, the program dispatched pairs of international and local NTU students to elementary and junior high schools to share presentations introducing the international students' home cultures.

Coming from countries as far-flung as the United States, France, Malaysia, China, Panama, and Guam, the international students who participated in this intercultural community service program represented a variety of cultures from around the globe. More than thirty NTU students and over one





▲ NTU President Pan-Chyr Yang and Chair of the Foundation for International Cooperation in Higher Education of Taiwan Dr. Flora Chia-I Chang join in opening the Executive Conference on International and Cross-strait Affairs.



▲ Many of the conference's nearly 180 participants attend a presentation.

INTERNATIONAL EDUCATION CONFERENCE ADDRESSES STUDENT EXPERIENCES

As cohost of the Executive Conference on International and Cross-strait Affairs, the Office of International Affairs welcomed international senior officers (ISOs) from universities spanning the globe to NTU on June 4. During this major event, nearly 180 attendees, including ISOs from Australia, Canada, Hong Kong, China, Japan, and South Korea as well as other Taiwanese universities, gathered to challenge the current state of international education and discuss engaging ways to transform the student experience by encouraging participation in opportunities abroad.

Opening the conference, NTU President Pan-Chyr Yang and Chair of the Foundation for International Cooperation in Higher Education of Taiwan (FICHET) Dr. Flora Chia-I Chang introduced the keynote speakers. The first speaker, Dr. Benson Ping-Cheng Yeh, Director of the MOOCs program at NTU, shared his teaching experience regarding gamification and its positive effects on student engagement. The second speaker, Sophia Hsiang-Ping Ma, executive secretary of the Ministry of Education's Office of Higher Education Innovation and Transformation, presented data on global trends in higher education and current strategies in Taiwan's education system.

The conference also included panel discussions and parallel sessions. During the panel discussions, university representatives from around the world discussed the steps their institutions are taking in the areas of higher education development and internationalization.

NTU Vice President for International Affairs Luisa Shu-Ying Chang discussed the OIA's efforts to create short-term programs for international students through the NTU Plus Academy. Deputy Vice President for International Affairs Bennett Fu spoke about NTU's conceptual and empirical analyses of the strategic approaches adopted by the university to strengthen bilateral collaboration with Kyoto University. And, Deputy Vice President for International Affairs Jiun-Huei Protty Wu chaired a session discussing new trends in university alliances and their benefits to internationalization.

USC GLOBAL FELLOW SUMMER INTERNS JOIN OIA STAFF



▲ Summer interns at the Office of International Affairs, USC Global Fellows Jasmine Zahedi, Stephanie Jean, and Linda Chow, show off their smiles.

This past summer, NTU welcomed three interns from the University of Southern California to the Office of International Affairs. Jasmine Zahedi, Stephanie Jean, and Linda Chow were selected under the highly selective Global Fellows Internship Program and assigned to work at NTU for two months. Jasmine was placed in the OIA's Plus Academy section; Stephanie, the Global Alliances section; and Linda, the Global Engagement Section.

The OIA was extremely excited to host its third batch of USC Global Fellows.

Jasmine Zahedi

I cannot even begin to express how lucky I am and grateful I feel to have had the opportunity to work in the Office of International Affairs this summer. Everyone I worked with, from the student advisors to the vice president and deputy vice presidents, truly made me feel at home and needed in the office. The environment was consistently stimulating and lively. Not only did everyone constantly reach out to give the other interns and me tips on where to go and what to eat, but they also created jobs for me that were suited to my interests and abilities.

Stephanie Jean

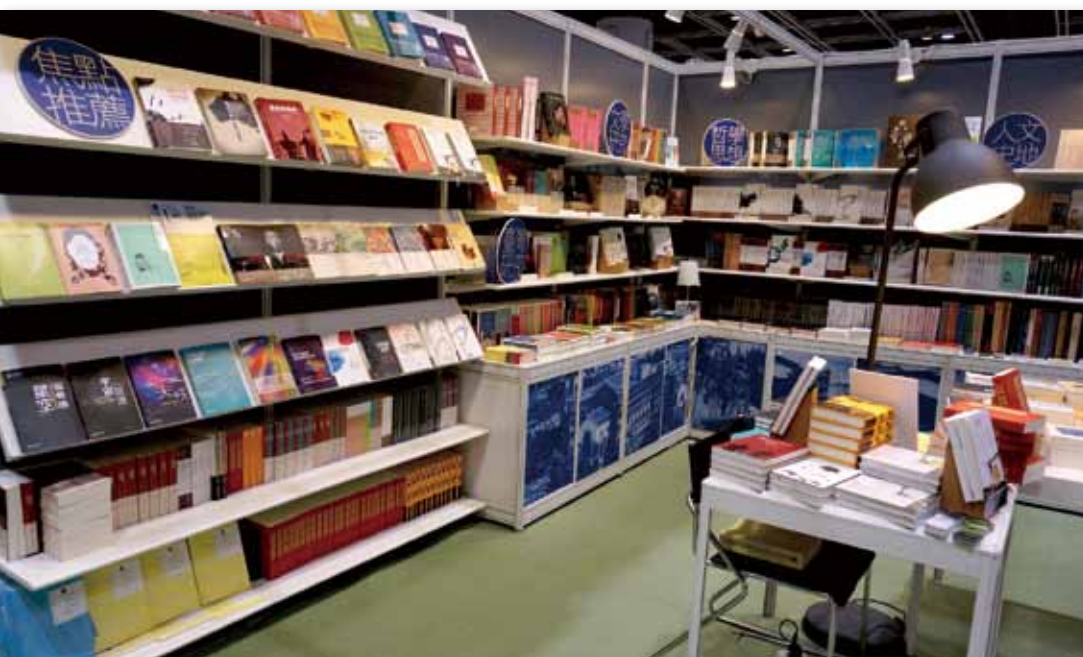
Being in Taiwan and working at NTU has been a wonderful experience. During these two months I was able to learn about Taiwanese culture and explore Taiwan, befriend NTU students, and work on a meaningful project about Africa and its educational opportunities. This internship at NTU was particularly meaningful due to the amazing OIA staff: everyone was very welcoming and accommodating. In addition, being able to help the study abroad office with orientation for the international students' summer programs was also a very rewarding experience. It allowed me to meet and befriend both NTU and international students.

Linda Chow

Being a part of the Office of International Affairs staff has been one of the major highlights of this internship program. The USC interns constantly boast that NTU is the best place to work at and that all future Global Fellows should strive for this particular internship placement—this could not be more true in my opinion. Not only does the international work culture fascinate me, I constantly feel challenged to think critically and am encouraged to use my own knowledge of higher education and student affairs to be creative with my projects.

Note: This article is an abridged version of an article written by the 2015 USC Global Fellows Jasmine Zahedi, Stephanie Jean, and Linda Chow.

International Corner



▲ NTU Press's exhibition space welcomes Hong Kong book lovers at the Hong Kong Book Fair.



▲ Visitors flip through books as they peruse NTU Press's comprehensive offering.

Taiwanese Democracy a Hot Seller for NTU Press at Hong Kong Book Fair

▼ An overview of the third floor of the Hong Kong Book Fair



outing a comprehensive catalogue covering more than 400 titles, NTU Press attracted Hong Kong book lovers at the Hong Kong Book Fair, which was held July 15-22.

After the Taipei International Book Exhibition and Frankfurt Book Fair, the Hong Kong Book Fair is the international book exhibition into which NTU Press pours the most effort. Great NTU

books that the Press sought to promote at the fair included: *A Grand View of the Dream of the Red Chamber: A General Introduction*, *Selected Poems of Leung Ping-kwan, 1963-2012*, *A New Interpretation of Hegel*, and *Total War and Taiwan: A Study on the Collapse of Japanese Colonialism*.

In comparison with other major international book shows, The Hong Kong Book Fair is a

major marketing event for the buying and selling of books. Despite this, and the limited readership of academic books generally, NTU Press was delighted to find that readers in Hong Kong were interested in even some of the publisher's more challenging and less popular books.

Due to the Hong Kong burgeoning democracy movement, visitors expressed strong interest in publications on the development of democracy in Taiwan. Consequently, *The 'Republic of China' and the Politics of Taiwanization: The Changing Identity of Taiwan in Postwar East Asia*, by Waseda University scholar Masahiro Wakabayashi, published by NTU Press, was a hot seller. Books on the history of Chinese thought also sold well, while even highly specialized books like *Earthworm Fauna of Taiwan Biota Taiwanica* and *Leech Fauna of Taiwan* attracted some attentions and sold a few copies.

The book fair offered a special area dedicated to Taiwan's publishers this year. NTU Press teamed up with nine other Taiwanese university presses to operate a joint booth section and highlight the soft power of Taiwan's academic publishers.



STUDENTS PAVING WAY FOR A FUTURE OF DRIVERLESS CARS



“Look, Ma! No hands! No feet! Not even a driver!”
Indeed, students of the Department of Mechanical Engineering are paving the way for a future in which driverless cars are a reality.

Giving a public preview of this driverless world, a team of more than 20 mechanical engineering students recently gave successful presentations of their two autonomous vehicles at a national self-driving vehicle demonstration event. Organized by the Taipei Section of the Society of Automotive Engineers (SAE) International alongside its 23rd National Environmental Vehicle Competition for Vocational Schools and Universities, the event was held at the Automotive Research and Testing Center, Taiwan's premier automobile testing facility, on May 16.

The students' fleet consisted of an autonomous electric golf cart and a three-wheel light electric intelligent tracking vehicle that can adjust its speed to maintain a safe distance behind the vehicle ahead. Both vehicles were outfitted with an array of high-tech gear that gave them an amazing awareness of their surroundings and the ability to maneuver precisely in real-time. Selected for its low cost, adaptability, and reliability, the vehicles' core technology included real-time precision GNSS/INS (Global Navigation Satellite System/Inertial Navigation System) positioning, map-guided vehicle motion control, and environmental awareness technology that relies on laser and vision sensors.

The NTU team successfully handled the three driving scenarios presented in the SAE demonstration. The first involved an S-shaped lane delineated by traffic cones and required the autonomous vehicles to determine the proper route to avoid hitting the cones. The second scenario confronted the teams' vehicles with a broken down car and a reflective triangular warning sign blocking the lane ahead on a two-lane road. The self-driving vehicles needed to detect the car and change to the other lane. The third, using a dummy to simulate a pedestrian crossing the road, required the vehicles to detect the presence of the pedestrian and brake immediately to let the pedestrian pass.

Research Achievements

Students Publish Research in Leading Allergy Journals



▲ Prof. Bor-Luen Chiang is flanked by his graduate students Chien-Hui Chien (left) and Chiao-Juno Chiu (right).

Two graduate students working under Prof. Bor-Luen Chiang in the College of Medicine's Graduate Institute of Immunology have drawn international attention to NTU by having their research articles published in the two top-rated journals in allergic diseases. Ms. Chien-Hui Chien's article was published in the May issue of *Journal of Allergy and Clinical Immunology*, and Ms. Chiao-Juno Chiu's article appeared in the April issue of *Allergy* as the cover article.

Ms. Chien investigated the mechanisms of oral tolerance on allergic asthma and a group of newly-discovered regulatory T cells (Tregs), induced by B cells (Treg-of-B cells). Relying on animal models of allergic asthma, she confirmed that B cell-induced Tregs of a single protein and single specificity administered orally can ameliorate symptoms of allergies in animals due to their capability for non-specific modulation. Ms. Chien's article, "Single allergen-induced oral tolerance inhibits airway inflammation in conjugated allergen immunized mice," explains how her findings could lead to breakthroughs in the development of immunological treatments for allergic diseases.

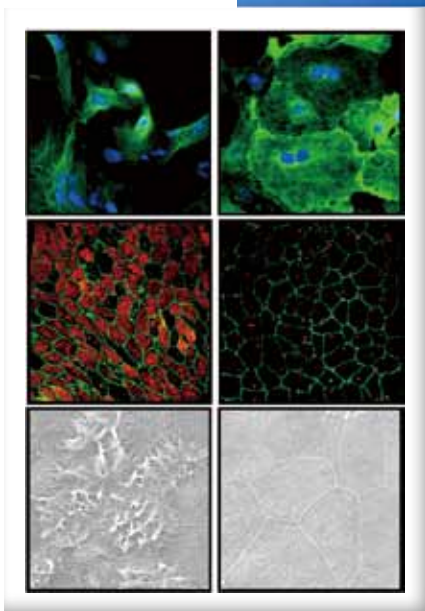
In "Lung-derived SSEA-1(+) stem/progenitor cells inhibit allergic airway inflammation in mice," Ms. Chiu reports on her discovery that the lungs of neonatal mice express a high volume of SSEA-1(+) pulmonary lung stem/progenitor cells and that these cells possess the capabilities of clonogenicity and self-renewal,

which enable them to differentiate into pneumocytes and tracheal epithelial cells. Using mouse models of allergic asthma, she transplanted SSEA-1(+) pulmonary lung stem/progenitor cells into mice, and found that the cells suppress eosinophil chemotactic factor and the cytokine thymic stromal lymphopoietin produced by epithelial cells, which significantly reduces airway hyperresponsiveness, limiting inflammation and damage to the lungs.

◀ SSEA-1+ PSCs possess the ability of multipotency and can differentiate into proSPC+ (pro-surfactant protein C; green) type II pneumocytes, AQP5+ (green) type I pneumocytes, and ZO-1 (green)- and -tubulin (red)-labeled ciliated and nonciliated cells. formation of in vitro-cultured SSEA-1+ PSCs.



► The cover of *Allergy* features graduate student Chiao-Juno Chiu's research by presenting images of primary and secondary spheres





When the Department of Anthropology opened the doors of the Museum of Anthropology to the general public in 2010, the museum had undergone an important transformation. Once a small specialized anthropological archive dedicated primarily to academic and research purposes and accessible only to researchers and scholars, the museum then became a full-scale university museum guided by a new mission to utilize its valuable and fascinating archives to educate the public and to promote public engagement and participation through such activities as cooperative projects with Taiwan's indigenous peoples and special exhibitions.

One of the museum's major efforts to engage and involve the present-day indigenous peoples of Taiwan has been the establishment by NTU's ethnological researchers of special artifact sharing relationships with indigenous groups. While the museum houses the artifacts shared under these partnerships for preservation and exhibition purposes, members of indigenous groups, when led

by group elders, are granted special access that gives them the opportunity to observe the artifacts of their particular group up close while learning about the artifacts' history through their group's oral tradition.

Besides maintaining a number of permanent exhibits, the museum has held an ongoing series of special exhibitions during the five years since its opening. The latest exhibition, which closed on August 10 after a month and a half run, was curated completely by students of the Department of Anthropology.

Focusing on the culinary arts of the Neolithic Yuanshan culture that occupied the northern edge of the Taipei Basin as early as 3,200 years ago, the students took full responsibility for designing, arranging, and promoting the event, gaining practical experience in museum planning in the process. Moreover, the student curators created a thought-provoking narrative that juxtaposed excavated Yuanshan cooking and eating utensils against our modern implements, serving up a stone ax head aside a knife and fork, and leftovers from a Yuanshan shell mound next to aluminum foil.



Teaching and Learning



NTUtopia Redesigns Welfare Group's Handmade Soap to Boost Public Visibility

Taiwan has numerous social welfare organizations that strive to solve a wide range of social problems. Many are small-scale groups that lack visibility, and they have limited access to resources, which hinders their effectiveness. A group of students on the NTU campus is working to help such organizations through their NTUtopia platform.

The students established NTUtopia in the spirit of a social enterprise, adopting two main thrusts in order to achieve their goals. First, NTUtopia aims to assist social welfare groups in redesigning the products they make so as to make their operations more sustainable. The redesigns are intended to boost the products' value and introduce them to sectors of society that have a high degree of social influence in order to enhance their visibility and help the groups achieve their ultimate aims. Second, the students behind NTUtopia have turned to the popular crowdsourcing platform Flying V to raise funds to sponsor work to increase public awareness of these social welfare organizations working for disadvantaged groups.

After visiting numerous social welfare groups, the members of NTUtopia came away most impressed by Gong Sheng Yi Tsun, and chose to be the first NTUtopia partner. Operating in Yangmei Township, Taoyuan County, Gong Sheng Yi Tsun takes in children and young people who are unable to meet the requirements for care at other social welfare organizations and have been abandoned by society and are incapable of fending for themselves.

For the people under its care, Gong Sheng Yi Tsun acts as a family, providing companionship and compassion that helps them overcome the sense of alienation and hopelessness that results from their abandonment and even improves their mental and physical condition. The group also trains the young people under its care who are old enough to work to produce handmade soap. This practical experience gives the young soap makers valuable work skills as well as a sense of self-worth and affirmation as productive members of society.



iNSIGHT Offers Design Innovation Courses at Online Academy

The NTU Center of Innovation and Synergy for Intelligent Home Technology (iNSIGHT Center) has formed a partnership with the influential business magazine CommonWealth in order to offer an inspiring program of corporate-level design innovation courses through the magazine's online CommonWealth Innovation Academy.

Launched in March, the iNSIGHT Design Innovation Program's seven integrated online courses were formulated to promote the center's philosophy of human-centered design innovation to the nation's business executives. Though online for only a handful of months, the program has already accumulated a high volume of visits. CommonWealth attributes this rapid popularity to the program's rich content and its lively and engaging lecturers.

The program's courses complement and build on each other, taking students from the initial stages of field research and basic values to the final solutions of tangible products and integrated business models. Moreover, the lecturers present real business cases to illustrate their innovative ideas and even incorporate personal insights they gained while working with their iNSIGHT team members.

iNSIGHT embraces open innovation and collaboration between academia and the business community and has pursued numerous cooperation projects with government agencies and private enterprises since 2008.

The courses offered through the iNSIGHT Design Innovation Program at the CommonWealth Innovation Academy are: "What is Design Innovation — Prospective Business Leaders Must Know" (Prof. Pei-Ling Liu, Director, NTU iNSIGHT Center); "Analysis on Practices of Design Innovation" (Prof. Chuin-Shang Chen, Vice Director, NTU iNSIGHT Center); "Identifying 'Right' Questions through Five Steps" (Jen Wang, Senior Manager, User Experience Team); "360-Degree Verification: 'Health Check' for Your Products" (Iris Liu, Manager, User Experience Team); "Be Human-Centered: Four Steps to Sensational Designs" (Sean Chiu, Head, Interactive Design Team); "Swift Test and Modification: Three Levels of Experience Prototype Development" (Min-De Lu, Head, Technological Innovation Team); and "Design before Innovation: Creating an Undefeated Business Model" (Calvin Lai, Chief Strategy Officer, NTU iNSIGHT Center).



► Director of the NTU Center for the Arts Tung Shen (left) joins her Graduate Institute of Musicology colleague Prof. Szu-Wei Chen in serving as emcees during the concert.

NTU at a Glance

A moving concert paying tribute to Liao Chien-Yun and celebrating the countless classics of Taiwanese popular music produced in the studios of Four Seas Records, the record label Liao founded six decades ago in 1955, took place at the First Student Activity Center Auditorium on the evening of June 26. Arranged by the NTU Center for the Arts in collaboration with Four Seas Records, "Songs of Reminiscence—A Celebration Concert for Four Seas Records" featured performances by singers and musicians who were active during the record company's heyday, which lasted from the 1960s to the 1980s, as well as a multimedia presentation introducing the company's history.

▼ The concert opens with a profound sense of heartwarming nostalgia.



Liao, revered as a pioneer of the creative industries in Taiwan, passed away at the end of 2014. In 2012, nearing the end of his life, he donated to NTU the entirety of his treasured collection of vinyl records, books, and sheet music from his days at Four Seas Records.

Since then, NTU Library and the Graduate Institute of Music have joined forces in archiving and sharing these valuable resources. These efforts have resulted in the creation of the Collection of Digitized Recordings of Four Seas Records as well as the publication of the book "Musical Recollection in Formosa: The Legend of Zhou Lan-Ping and Four Seas Records."



▲ Tan Chang-Rong (center), the widow of revered record industry pioneer Liao Chien-Yun, watches a performance during the concert.

Concert Celebrates Four Seas Records Founder Liao Chien-Yun

▲ NTU student and alumni musicians accompany singer Huang Hai-Hsia, who is the daughter of famous singer Tse Wei.



ALL-NATURAL AIYU GELATIN DRINKS FOR SALE

A new place to pick up a tasty, cool drink while on campus opened at the Agricultural Product Exhibition Center in New Moon Pavilion this summer.

Aiyu Fang offers sweet aiyu gelatin beverages made from all-natural ingredients that it guarantees are 100% natural and 100% yummy. The first items to make its menu are a passion fruit aiyu drink and a lemon aiyu drink.

Aiyu Fang uses aiyu varieties that are selected by the Taiwan Forestry Research Institute for texture and ease of forming gelatin, and the shop's aiyu, passion fruit and lemons are all produced by farmers who have received technical guidance from the Department of Horticulture and Landscape Architecture. Other ingredients are sent for inspection to ensure they are safe and toxin free.

The Aiyu Fang brand was created through a cooperation project between the NTU Experimental Farm and Kingroot Garden and Landscape Ltd. To minimize the shop's carbon footprint, the landscaping firm adopted an open-air design and created a shady garden space with a trellis, vertical garden, and flower boxes.

