



Published by National Taiwan University
Website: <http://ntuhighlight.ntu.edu.tw/>

NTU

JUNE 2015
No. 48

HIGHLIGHTS

Foxconn Invests in NTU Gaming Platform

**NTU, Leiden U Strengthen
Academic Ties**

**Kuwait U Officers Attend
Management Workshop at NTU**

**Socially Conscious Students
Help Homeless**

Special Report

Cancer Hospital





CONTENTS

Special Report

- 02** NTU Developers Attract US\$6 Million Foxconn Injection for Educational Gaming Platform
- 04** Construction of Advanced Cancer Hospital Proceeds on Gongguan Campus
- 05** NTU and Leiden University Building on Three Decades of Cooperation

Honors

- 06** NTU Athletes Shine at 2015 National Intercollegiate Games
- 07** Physical Therapy Pioneer Accepts International Service Award

International Corner

- 08** NTU Flies Solo at APAIE Conference in Beijing
- 09** Kuwait University Administrators Attend Third NTU Training Workshop
- 10** Short-term NTU Spring Plus Programs Launched for International Students



Research Achievements

- 12** Non-Invasive 3D Optical Biopsies to Replace Physical Biopsies

Campus Scenes

- 13** Students Collect Bonus Points to Help Homeless to Get Free Meals

Teaching and Learning

- 14** NTU Press Opens Screen Printing Workshop for Azalea Festival
- 15** Train Lovers Flock to Secret Platform 1 1/2
- 16** Art Fest Explores Creativity of Campus Art Scene

NTU at a Glance

Literary Scholar Publishes First Book in Series on *Dream of the Red Chamber*





Vice President's Statement

LIANG-GEE CHEN

NTU Executive Vice President for Academic Affairs

I have long stood as a strong advocate for cultivating students' innovative thinking and instilling in them the boldness to create their own businesses. Steve Jobs maintained that "innovation distinguishes between a leader and a follower." When coupled with entrepreneurship, innovative ideas become substantial forces that the public can utilize. These forces are thereby transformed into actions capable of bringing about the betterment of society, and even changing the world.

While NTU is an elite international university, the administration has been challenged with how to continue the university's ascent to even greater heights after having joined the ranks of the world's 100 leading institutions. It is my belief that persistent innovation is the only solution to meeting this challenge. Since innovative thinking is so highly important, it is vital that every NTU student appreciates this concept so that they can put their ideas into action.

Based on this conviction, NTU has assumed an essential role in creating a fertile environment for entrepreneurship. Just recently, the university has introduced new inter-university exchanges and financial awards in its effort to foster innovative thinking.

A novel twist on international exchanges

In a novel twist on international student exchange programs, NTU introduced a new incentive that facilitates faculty and research personnel exchanges between NTU and its international partner universities last fall. With the collaboration of such strategically important universities as Kyoto University, the University of Tokyo, and the University of Illinois, the university's faculty and members of our research teams can now join our students in venturing abroad to expand their knowledge.

Seed funding for startup projects

The NTU Diamond Seed Fund was established with donations from the business community as a means for encouraging students to form their own businesses. Student startups that are judged to be guided by feasible business plans and social responsibilities are awarded NT\$500,000 in venture capital. The fund encourages the participation of both local and international students so that students from a variety of backgrounds can learn about and experience the needs of each other's culture and society.

Scholarships for international doctoral students

This year, NTU began offering 40 annual scholarships of NT\$500,000 to international doctoral students. The campaign was launched as part of our efforts to encourage greater numbers of international doctoral students to study at NTU and thereby promote international exchanges, broaden the campus' international outlook, and enhance the university's global competitiveness.

As the leading university in Taiwan, NTU will endeavor to develop its global outlook and international competitiveness. It will also undertake the responsibility of leading other Taiwanese universities in joining it on the world stage. And, as NTU students pursue their individual ambitions through innovative thinking, they should also learn the value of teamwork and how to transform their unique knowledge into sparks that ignite a group's team spirit.



NTU DEVELOPERS ATTRACT US\$6 MILLION FOXCONN INJECTION FOR EDUCATIONAL GAMING PLATFORM

BoniO Incorporated, an educational gaming software firm founded last year by a team of NTU software developers, recently signed an agreement with Taiwan's Foxconn Technology Group under which the global technology giant will supply a capital injection of US\$6 million to the new company. The software startup was established by the Department of Electrical Engineering's Prof.

Initiated in 2013, the company's first project, PaGamO, is the world's first multiplayer online gaming project designed specifically for massive open online courses (MOOC). Following BoniO's establishment in March of 2014, the game was formally released as the world's first such educational gaming platform for schools, businesses, and individuals.

After its release, the project found immediate success among both users and critics. When December rolled around, Prof. Yeh found himself accepting on behalf of the PaGamO team the top award at a major



Ping-Cheng Benson Yeh along with his business partner Chih-Hung Jason Ho, who serves as the company's CEO. The team also includes a collection of students from the Department of Electrical Engineering and the Department of Computer Science and Information Engineering who have been working on the company's PaGamO development project here at NTU. BoniO intends to use this major infusion of funding to accelerate its expansion into the global educational technology market.

Foxconn's investment stands as the largest ever in a Taiwanese software startup. Moreover, BoniO has granted NTU a stock holding equivalent to US\$300,000 as compensation. This also marks a new high in founder compensation provided by a campus startup company to its parent university in recent years.

- ▶ NTU President Pan-Chyr Yang, NTU Vice President for Academic Affairs Liang-Gee Chen, and Prof. Ta-Te Lin of the Department of Bio-Industrial Mechatronics Engineering join Prof. Ping-Cheng Benson Yeh and his BoniO team in smiling for the camera.





▲ Prof. Ping-Cheng Benson Yeh and Prof. Kevin Werbach of The Wharton School pose for a photo at the awards ceremony.

global education innovation competition in Philadelphia, U.S.A. The event's organizers, Quacquarelli Symonds and the Wharton School SEI Center of the University of Pennsylvania, praised the platform's ability to stimulate students' willingness to learn.

This year, BoniO has continued to add to its list of successes. In March, the PaGamO team released another platform specifically for elementary and junior high school students and educators. Compatible with any academic subject, the platform features fun and engaging challenges that have allowed it to rapidly surpass 50,000 student users. In addition, the University of Pennsylvania's School of Dental Medicine sought out the company to sign a three-year cooperation contract, bringing the PaGamO gaming platform into the Ivy League as well as the realm of dentistry.

Prof. Yeh points out that educational technology has become one of the most sought-after technological fields in the world. However, the BoniO founder is disappointed that, while countries around the world have continued to initiate major investment projects in this area over the last three years, Taiwan remains devoid of any comparable investment. This is why Yeh's PaGamO team has since its establishment set its sights on the international market instead, focusing especially on Europe, North America, and China.

Aiming at American consumers, BoniO presented a PaGamO English vocabulary variety designed for use by the general public this May. As for Europe, the company has been working closely with German businesses and educational institutions in preparation for the release of a PaGamO-based entrepreneurship workshop to take place this summer. BoniO is forecasting a vigorous performance for PaGamO in the North American and European markets this year.

On another front, once it is formally up and running under a pay-based model, the software developer has plans to fulfill its social responsibility by inviting 500 elementary and junior high schools serving educationally disadvantaged remote communities around Taiwan to use the PaGamO platform free of charge.

BoniO continues to attract attention both internationally and here in Taiwan. At the beginning of the year, it turned down an enticing buyout offer submitted by an overseas organization. The team, however, has preferred to maintain operational control in order to realize their shared dreams for the company. Now, backed by Foxconn's substantial investment, the firm is moving up its schedule for taking PaGamO to consumers in Europe, North America, and China.



▲ Prof. Yeh's PaGamO team became to first in the world to develop a multiplayer online game specifically for massive open online courses in 2013.

CONSTRUCTION OF ADVANCED CANCER HOSPITAL PROCEEDS ON GONGGUAN CAMPUS

September 4, 2007 marked the beginning of a new chapter in the history of cancer treatment in Taiwan when former President Si-Chen Lee joined Terry Guo, chairperson of Foxconn Technology Group and founder of the YongLin Healthcare Foundation, in signing a memorandum of understanding for the donation of a cancer research and treatment center. Under the agreement, the foundation would donate a state-of-the-art cancer center and hospital, and collaborate with NTU on the development of a biomedical engineering program. Nearly a decade on, the plans set in motion back in 2007 are approaching fruition with construction of the hospital building scheduled for completion in 2017, and operations to officially open in 2018.

Following the signing ceremony, a planning team made up of representatives from the university and the foundation was formed. The team proceeded to hold numerous meetings and brainstorming sessions that aimed to apply the most advanced concepts and technologies in the design and construction of the hospital building. The goal to create a world-class facility for basic and clinical cancer research, biomedical engineering research and development, and cancer prevention and screening that would serve to facilitate a comprehensive range of interdisciplinary biomedical technology research. As such, a group of excellent architects, whose architectural designs are rooted in the latest, most cutting edge concepts of cancer treatment, was recruited to achieve this goal.

Located on NTU's Gongguan Campus, the building's structural foundation covers an area of 19,000 square meters. The main hospital building and its adjacent North and South Buildings are designed to occupy the center of the construction site. It is hoped that the exhaustive efforts invested will ultimately transform NTU's Gongguan Campus into one of the world's leading cancer centers and biomedical technology science parks.



1 NTU's future cancer hospital is visualized on the Gongguan Campus in a 3D graphic.

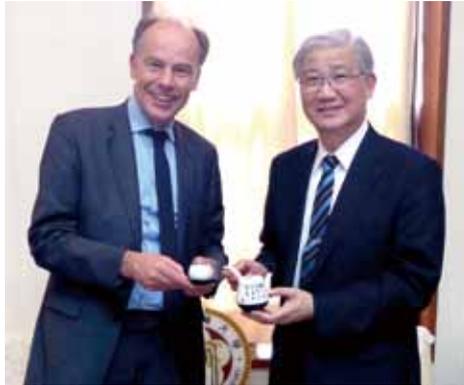
2 NTU President Pan-Chyr Yang is all ears as he listens to Terry Guo, chairperson of Foxconn and founder of the YongLin Healthcare Foundation, elaborate on the innovative concepts being applied in the establishment of the cancer hospital.

The construction of the site itself exemplifies NTU's pursuit of efficiency and excellence. Due to limited resources and a tight construction schedule, an advanced construction approach called island excavation has been used to create the hospital's subterranean levels, which will descend to a depth of 18 meters. Made possible by the site's advantageous geological conditions, this efficient method not only cuts excavation time and reduces disturbances to the site's surrounding residents; it also shortens overall construction time by allowing structural work to proceed simultaneously both underground and above.

This year, the construction crew will lay the foundation of the main building, erect its tower crane, and commence assembling the steel beam structure. As construction progresses, the building will ascend level by level to assume its lofty position in the sky.



3 The construction team has created the hospital's subterranean levels through an approach called island excavation.



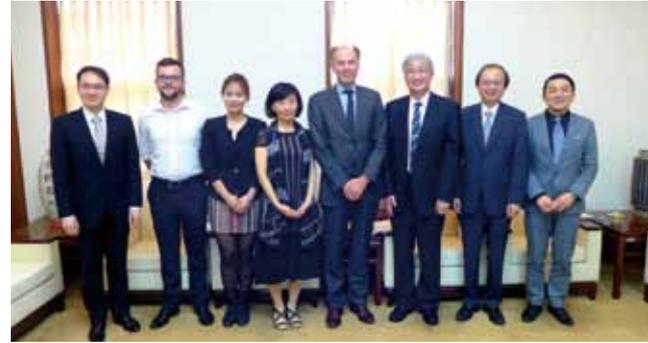
▲ NTU President Pan-Chyr Yang exchanges gifts with Leiden University President Carel J.J.M. Stolker.

NTU AND LEIDEN UNIVERSITY BUILDING ON THREE DECADES OF COOPERATION CAMPUS

NTU and the Netherlands' Leiden University have enjoyed three decades of cooperation since signing their first academic exchange agreement in 1985. To ensure that this strong partnership continues to flourish, NTU President Pan-Chyr Yang welcomed Leiden University President Carel J.J.M. Stolker to NTU on April 17. During President Stolker's visit, the two presidents discussed recently initiated cooperation programs as well as their shared goals of building liberal campuses and expanding internationalization.

The two institutions share many similarities. Leiden University is the oldest and one of the best universities in the Netherlands, while NTU is the leading university in Taiwan. Both universities aim to build liberal and innovative research and teaching environments while also increasing their respective international ties. In light of China's current rise, LU's motto, "Bastion of Liberty," and its renowned humanities programs, are consistent with NTU's position as a liberal gateway to Chinese culture. Moreover, both President Yang and President Stolker are new presidents with fresh ideas who were both inaugurated in 2013.

In their meeting, the two presidents talked about the growing number of international students worldwide and the importance of responding to



this trend by adapting university policy and education. NTU and Leiden are hammering out ways to increase the number of exchange and degree students between their two institutions. The two also expect to introduce double-degree, dual-degree, and joint-degree programs in the near future.

In addition, Yang and Stolker reflected upon the universities' existing cooperation programs. This includes NTU's 2013 partnership with LU's Critical Heritage Studies of Asia and Europe MA program, as well as the Department of Political Science's thriving 2012 student exchange program with LU's College The Hague in the field of social sciences. NTU and Leiden have also been pursuing scholarly cooperation, arranged primarily through Leiden University's International Institute of Asian Studies.

The two universities are also committed to expanding cooperation as they move into the future. With Leiden ranked 75th and NTU 76th in the QS World University Rankings of 2014/2015, they share an interest in continuing to learn from and cooperate with each other. The two presidents are presently working on a plan for their next meeting, which is expected to take place in 18 months with President Yang attending the opening of the new Asian Library at Leiden University.

NTU Athletes Shine at 2015 National Intercollegiate Games

This year's National Intercollegiate Athletic Games concluded with NTU athletes taking home a total of 19 gold, 21 silver, and 20 bronze medals. More than 400 athletes competing across ten categories represented the university in the annual event, which was held May 2-6 at Fu Jen Catholic University.

Our total of 60 medals placed us at fifth place in the medal count, making us the only university without an athletics department to make it into the top rankings.

Finance major Suzuki Haruna landed four gold medals in the team, all-round, and individual event categories in gymnastics.

Public Health major Yu-Ping Huang, meanwhile, broke the game's 100 and 200 meter men's breaststroke records. Huang was also responsible for half of the swimming team's eight gold medals this year. In addition, the swimming varsity team broke the intercollegiate records of the 200 meter women's butterfly and 400 meter men's individual medley.

One of the highlights of this year's event came when law student Hsuan-Ren Chen broke his own intercollegiate 800-meter run record at 1:52.50. This was Chen's second consecutive win in this category.

Good news also emerged from the taekwondo, tennis, and fencing events. In total, the NTU swimming team won eight golds, 14 silvers, and seven bronzes. The gymnastics club wrapped up five golds, one silver, and two bronzes, while the taekwondo team took home two golds, one silver, and one bronze. Both the fencing and tennis teams were able to secure at least one gold medal.

For more information, please visit the NTU Sports Team Facebook page.

► Public Health major Yu-Ping Huang grabbed four gold medals while breaking the game's 100- and 200-meter men's breaststroke records.



▼ Clocking 1:52.50 in the 800-meter run, law student Hsuan-Ren Chen broke the intercollegiate record he set last year. What better gift could he ask for as he prepares to graduate this year.



▲ In her first year to compete in the games, finance major Suzuki Haruna landed four gold medals in the team, all-round, and individual event categories in gymnastics.

Prof. Hua-Fang Liao of the College of Medicine's School and Graduate Institute of Physical Therapy traveled to Singapore on April 30 to accept the International Service Award at the opening ceremony of the 2015 World Confederation for Physical Therapy Congress.



Physical Therapy Pioneer Accepts International Service Award



Prof. Liao is the first physical therapist from Taiwan to have been nominated for the organization's International Service Award. As Taiwan's first recipient, it is a tremendous honor to be recognized as a role model of great influence and leadership among the organization's more than 350,000 physical therapists.

Founded in 1951 and boasting a worldwide membership of 106 member organizations, the WCPT is the sole international voice in the field of physical therapy. The Taiwan Physical Therapy Association became a member in 1982.

Prof. Liao is a leader of remarkable vision. Having graduated with one of the earliest classes of physical therapists in Taiwan, Liao later went on to becoming the chair of the School of Physical Therapy at NTU (1998-2001). It was during this period that she started preparatory work for the establishment of Taiwan's first doctoral program in physical therapy here at NTU, which was later launched in 2004.

As the president of TPTA, Prof. Liao was able to build consensus among the deans

of Taiwan's physical therapy programs in setting the standards for entry-level physical therapy education nationwide. She also constructed a physical therapy digital museum in order to preserve the nation's historical development of the trade.

Prof. Liao is also a clinical expert and pioneer in pediatric physical therapy and early interventions. She earned the first Palm Tree Award of the Chinese Association of Early Intervention Program for Children with Developmental Delays in 2003 and the NTU Outstanding Social Service Teacher Award in 2010. Although Prof. Liao retired from her full-time duties at the School and Graduate Institute of Physical Therapy in 2012, she remains active in teaching as an adjunct faculty member.

Continuing to hold leadership positions in several associations, Prof. Liao is the acting executive director of CAEIP and the Cerebral Palsy Association of the R.O.C. She is also the executive supervisor of TPTA, chair of the Academic Committee of the Taiwan Society of International Classification of Function, and supervisor of professionals at the ARK Cerebral Palsy Center in Taipei.

NTU FLIES SOLO AT APAIE CONFERENCE IN BEIJING



- 1 NTU's representatives proudly man their booth at the 2015 APAIE Conference.
- 2 NTU's representatives join their counterparts from the University of Hamburg for a group photo.
- 3 Representatives of the University of Stuttgart take part in a meeting at the NTU booth.

The Office of International Affairs represented NTU at the 2015 Asia-Pacific Association for International Education Conference in Beijing, China, from March 23-26. Though in years past, NTU has attended the annual conference as part of a delegation led by Taiwan's Ministry of Education, this year NTU chose to fly solo as it joined the more than 170 exhibitors and 1,500 educators from around the globe who converged on the Chinese capital to celebrate higher education in the Asia-Pacific region.

The OIA took advantage of the excellent opportunity provided by the exhibition to design its own booth, which showcased our university colors and symbols. The booth's backdrop proudly displayed NTU's General Library, the Fu Bell, a Malayan night heron, and the words "Universal Spirit." Each element of the backdrop served as a conversation starter. By demonstrating the essence of the NTU spirit and Taiwanese culture, the eye-catching booth succeeded in drawing inquiries from more than 200 international participants.

Taking place under the theme "The New Paradigm of Engaging Asia-Pacific Universities for Exchange and Cooperation in a Global Context: Challenges, Opportunities and Solutions," the conference provided an ideal platform for NTU's personnel to meet their counterparts from the world's leading universities, including the University of Toronto, Peking University, the University of Melbourne, and Maastricht University.

Meanwhile, NTU Deputy Vice President for International Affairs Bennett Fu teamed up with Dr. Claudia S. Leopold, vice president for international research and promotion at the University of Hamburg, in presenting an inspiring speech entitled "Identifying, Developing, and Managing Strategic Partnerships." During the speech, the two shared their universities' experiences in developing strong ties with like-minded institutions.

With a membership exceeding 1,000 international education professionals, APAIE promotes communication, networking, and professional development in order to bring together active international educators in the Asia-Pacific region. In the spring of 2016, the 11th Annual APAIE conference will be hosted by the University of Melbourne in Australia.



- ▲ Kuwait University administrators participate in a workshop.
- ▶ Kuwait University and NTU administrators smile for a group photo.



KUWAIT UNIVERSITY ADMINISTRATORS ATTEND THIRD NTU TRAINING WORKSHOP

Administrative officials and personnel from Kuwait University arrived at the NTU campus to take part in NTU's third Kuwait University Administrative Personnel Training Seminar Project at the end of March. The project was the third in a series of week-long workshops led by personnel of various NTU administrative units that have shared with the Kuwaiti trainees the intricacies behind the management of NTU's administrative system and promoted multicultural understanding on both sides. Each workshop has focused on different areas of university administration. The latest program centered on public relations and finance.

Following the week-long workshop, NTU officials and senior administrative personnel joined their Kuwaiti counterparts in a closing ceremony on March 27. Among the NTU administrators were Deputy Vice President for International Affairs Bennett Fu and Vice Dean of the School of Professional Education and Continuing Studies Chung-Jen Chen. The Arabic-speaking diplomat Azmi Wang-Lu Chang also attended the ceremony on behalf of Taiwan's Ministry of Foreign Affairs.

Addressing the participants, Deputy Vice President Fu spoke of the growing relationship between the two universities. Fu pointed out that while KU is one of just a small number of NTU partner universities on the Arabian Peninsula, it is the one with which NTU has shared the closest exchanges in recent years. The deputy vice president also recalled joining Vice President for Student Affairs Tsung-Fu Chen in leading a delegation of 12 NTU students on an exchange visit to KU in 2014. He then shared the joy he felt in welcoming a reciprocal visit by a delegation of KU officials to NTU in early March of this year. Declaring "Taiwan's most beautiful scenery is its people," Fu expressed his hope that the Kuwaiti guests had not only gained valuable experience during the training program, but had also enjoyed the opportunity to experience the passion and warmth of Taiwan.

Speaking on behalf of her colleagues, one KU administrator concurred with the deputy vice president's remark about the beauty of the Taiwanese people and expressed appreciation for NTU's warm reception. She said that her time in the country had given her many different experiences and left her feeling delighted and satisfied. She added that she hoped she would have the chance to visit Taiwan again.

▼ Spring Plus 3's Waseda University students observe a biology exhibition at the National Taiwan Science Education Center.

Short-term NTU Spring Plus Programs Launched for International Students

The Office of International Affairs' Center for International Education has enjoyed great success in organizing the short-term NTU Summer Plus programs for international students during recent summers. Encouraged by the increasing popularity of these courses, the CIE rolled out its inaugural offering of NTU Spring Plus this year.

As with Summer Plus, the new spring programs combined intensive coursework with learning excursions and social activities. The participating students were given the chance to gain in-depth knowledge in their fields of interest while interacting with other international and local students, and learning about the culture of Taiwan. By extending the summer programs into the spring, the CIE was able to provide more options and greater scheduling flexibility so as to attract more students from universities around the globe to participate in NTU's exciting short-term programs.

This first Spring Plus lineup offered three programs in total, two of which took place in March. This included the three-week NTU Spring Plus 1—Chinese Language and Culture, and the two-week NTU Spring Plus 2—iChiba NTU English Language and Culture, which was designed especially for students of Japan's Chiba University.



▲ Students learn the craft of lens grinding during an astronomy class.

Meanwhile, the NTU Spring Plus 3—Science and Culture—was a shorter program that brought a crew of 10 freshmen students and faculty members from Japan's Waseda University to NTU for eight days in May. This program was scheduled to coincide with Japan's annual Golden Week holiday season, a time when the NTU partner university encourages its science and engineering students to study abroad in order to expand their international perspectives.

Spring Plus 3 was planned and designed by Deputy Vice President for International Affairs Jiun-Huei Protty Wu, a cosmologist at the Department of

International Corner



▲ (left) Plus 3 students enjoy a guided tour of the Xitou Nature Education Area.(right) The Waseda University students visit the Museum of Anthropology.



Physics who enjoys sharing his lifelong love of making telescopes. Over the course of the program's action-packed eight days, the students were led on an exploration of the world of science through a wide-ranging survey of such fields as physics, chemistry, biology, ecology, geology, astronomy, and robotics.

The program included exciting lectures as well as adventures outside of the classroom. For example, Prof. Bih-Yaw Jin of the Department of Chemistry and Prof. Hon-Tsen Yu of the Graduate Institute of Zoology delivered insightful lectures intended to provoke the visiting students into approaching science from completely new angles. After classes, the students ventured around campus, paying visits to Prof. Ren C. Luo's Robotics and Automation Laboratory, the NTU Heritage Hall of Physics, and Museum of Anthropology. Field trips around Taipei gave the students the chance to see the National Taiwan Science Education

Center as well as the National Palace Museum, which is renowned for housing the largest collection of the treasures of Chinese civilization.

In addition to attending intensive lectures and enjoying the urban excitement of Taipei, the Waseda U students adventured as far as the cloud-scraping mountains of central Taiwan, traveling deep into the mountains of Nantou County to visit the Xitou Nature Education Area at the NTU Experimental Forest. Birdwatching by day and observing the nocturnal ecology of fireflies by night, the students experienced the mysterious beauty of Taiwan's natural scenery. At Xitou's Mt. Fenghuang Overlook and Astronomical Observatory, PhD students from the Department of Physics gave lectures on astronomy and led the students in learning the craft of lens grinding, providing a unique opportunity to learn a hands-on craft and gaze at the distant stars and hovering moon while attending class.

The Spring Plus 3 program drew to a close back on the NTU campus with the Waseda visitors delivering their final presentations. The students shared their thoughts on the cultural differences between Japan and Taiwan, noting they were deeply impressed by Taiwanese hospitality. Some of the students also expressed their desire to return to Taiwan and to study Mandarin.

Research Achievements

- 1 Prof. Sheng-Lung Huang explains his optical biopsy technology to the press.
- 2 Ten years in development, Prof. Huang's 3D optical coherence tomography technique is expected to reduce diagnosis time and medical costs.



A team led by Prof. Sheng-Lung Huang of the Department of Electrical Engineering has been working for 10 years on the development of a high-speed, non-invasive in vivo 3D tomography technique that will reduce the risk, time, and cost associated with the detection and diagnosis of diseases such as cancer.

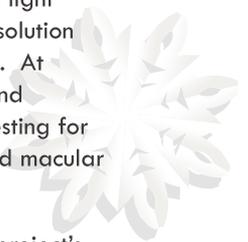
NON-INVASIVE 3D OPTICAL BIOPSIES TO REPLACE PHYSICAL BIOPSIES

Equipped with cellular resolution, this submicron 3D optical coherence tomography (OCT) technique can perform quantitative analysis of a single cell with measurements as precise as 0.01 mm, which is at least 100 times sharper than what present devices can detect. Using light sources to penetrate the skin, tissue anatomy and the flow of blood cells in microvessels can also be imaged in real time. This “optical biopsy” method may replace the conventional time-consuming practice of conducting physical biopsies. These are the major factors that allow the making of accurate early-stage diagnoses.

The core technology behind the NTU project is the inclusion of proprietary high-brightness crystalline fibers. The fibers can produce broadband emissions that range from visible light to near infrared in achieving high-speed and high-resolution anatomical imaging and dynamic blood flow analysis. At present, the technology has entered into preclinical and clinical trials, as well as the initial phases of animal testing for research on skin cancer, colon cancer, and age-related macular degeneration.

Initial findings from the trials have indicated that the project's optical biopsy technique, which features sub-micron resolutions in both the lateral and axial directions, is highly likely to replace physical biopsies for the early diagnosis of diseases and cancers in the near future. The project has been featured repeatedly on the website of the internationally-acclaimed Optical Coherence Tomography News.

Prof. Huang points out that the project has entered its 10th year of development with support from the Ministry of Science and Technology and Ministry of Economic Affairs. Its fourth-generation prototype holds a total of 15 awarded and pending patents in the United States. So as to expedite research, the project's intellectual property rights have been licensed to Apollo Medical Optics for product development and medical certification. The technique is expected to be in use soon in Taiwan's hospitals in such fields as dermatology, pediatrics, immunology, and rheumatology.





▼ In addition to collecting bonus points on campus, the Help Homeless People Eat campaign has also garnered donations of bonus points and money from concerned citizens around Taiwan.

STUDENTS COLLECT BONUS POINTS TO HELP HOMELESS TO GET FREE MEALS

For most people, exchanging bonus points to claim a free trinket or snack at a convenience store perhaps brings an exciting albeit ephemeral thrill to their day. Yet, there is a group of students at the Department and Graduate Institute of Social Work who refuse to take these ubiquitous bonus points so lightly. These thoughtful students have been running a campaign that seeks donations of the bonus points in pursuit of a mission of far greater substance—helping homeless people in need of a meal.

Back in 2012, Teng-Ju Ku, a recent graduate of the Graduate Institute of Social Work, gathered a team of students at the Department of Social Work who shared his concern for homeless people to kick off the Help Homeless People Eat campaign. Their charity program exploits the powers of social media in collecting bonus points from the public and then exchanging them for food and useful products to be offered to the displaced. So far, the campaign has managed to trade the bonus points for more than 4,000 packages of instant noodles, all of which have been distributed to the homeless.

Ku says he began to develop an initial understanding of the challenges the homeless confront in their daily lives while enrolled in Prof. Li-Chen Cheng's class, Poverty and Social Work.

Ku recounts how the campaign started off rather small, with students from the department simply asking for donations of bonus points

from their friends and relatives. Once the students started sharing the campaign on social media, a growing number of NTU students and faculty members began to make donations. Many of these donors later become members of the campaign. Eventually, even restaurants near the NTU campus joined in, taking the campaign off campus for the first time.

Eventually, numerous media outlets began taking interest in the students' charity work. The resulting publicity led to another wave of concerned people joining the campaign.

Since Ku's graduation, the NTU Social Work Student Association has taken over management of the Help Homeless People Eat campaign to ensure that it continues to grow steadily and provide much-needed help to the homeless people in Taiwan.

▼ Participants share the stories behind their drawings during a weekly event held for homeless people at NTU.





▲ A workshop instructor guides a participant in creating her own screen print.



▲ High school students surround the NTU Press booth as they learn to make screen prints during the Azalea Festival.

The modern world's demand for rapid, large-volume printing has led to the steady decline of screen printing, a traditional printing technique that has its origins in China's Song dynasty.

Hoping to remind the public of this fading craft, NTU Press teamed up with One-Ing Studio, a printing studio devoted to spreading the joy of screen printing, to hold a screen printing workshop on March 15-16 during the 2015 NTU Azalea Festival.

Reflecting the spirit of the annual festival, the NTU Press booth offered visitors a selection of three limited-edition screen-printed canvas tote bags and book covers bearing quotes from three of Taiwan's intellectual giants, Hai-Kuang Yin, Wen-Hsing Wang, and Cho-Yun Hsu.

Screen printing, also called silk screening or serigraphy, is a traditional technique that requires patient attention to detail during every step of the process. The intricate process includes shaping the stencils, mixing

NTU Press Opens Screen Printing Workshop for Azalea Festival

the colors, applying the ink, and finally drawing the squeegee across the screen to transfer the image. It is slow work, but only by taking things slowly and appreciating the details can a printer produce a work of true beauty and quality.

The hands-on workshop paired participants with professional instructors who provided one-on-one guidance through each stage of the printing process. The budding printers were given the choice of one out of three colors, cyan, magenta, or black, which they matched with an image they wished to print over a tote bag or book cover. Then, with the support of their personal instructors, the participants were able to produce their own unique screen printing creations. Though it was open for only two days, the workshop drew more than 300 people who enjoyed the opportunity to indulge their newfound curiosity in screen printing.

The booth also included a shop that sold NTU memorabilia produced by NTU Press. Among the hottest-selling items were miniature building-block replicas of iconic NTU buildings and limited-edition illustrated postcards of the campus and its buildings.

During last year's Azalea Festival, NTU Press worked with the venerable Ri Xing Type Foundry in displaying an antique circular press printer. The historical organization is home to the sole fully-operational movable type-printing press in Taiwan. These efforts to introduce the public to the various forms of printing demonstrate NTU Press's commitment to fulfilling its responsibility as an academic publisher that works for the preservation of knowledge and culture.

Teaching and Learning

Train Lovers Flock to Secret Platform 1 1/2

Secret Train Platform 1 1/2 was a special exhibition organized by the NTU Gallery of History and the NTU Railway Club in commemoration of the club's 25th anniversary. Held for two weeks in the second half of March, the exhibition transformed the gallery's mezzanine level into a train lover's paradise, creating an event capable of both piquing the curiosity of newcomers and inspiring old club members to feel nostalgia for days gone by.

The exhibition's curious name is a reference to Platform 9 3/4 in the Harry Potter book series as well as the location of the Railway Club's own origin story. According to founding member Prof. Chih-Wen Hung, who now teaches at National Taiwan Normal University, back when he was a first-year student here at NTU, he would often check out books about trains and railways from Bookcase 557.25 located on the mezzanine level of the old NTU Library (the building now occupied by the Gallery of History). Perusing the check-out cards in the backs of the books, he realized that these books that appeared as if they hadn't been read in years were in fact still being checked out from time to time. Relying on the check-out records, Hung began to compile a list of other railway fans on campus; the names making up that list ended up joining Hung as the Railway Club's founding members.

To set the atmosphere for the exhibition, the club's member and museum's personnel took painstaking effort to design the exhibition space in the styles of the platforms seen at Taiwan's railway, high-speed rail, and metro stations. The organizers' deep knowledge of railway culture was reflected in their use of authentic railway Chinese character fonts, signage, technical nomenclature, and exhibition items. In addition to displays depicting the club's history and publications, there were also many other informative and interactive displays, including a train driving simulator, model trains and railways, a primer on the operational



▲ Participants have their tickets punched by "conductors" during the opening ceremony for the exhibition Secret Train Platform 1 1/2.

principles of railway signaling, an introduction to Japanese railways, a Taipei Metro route map, and a look back at historical ticket designs.

The organizers' hard work made the event a popular attraction that drew nearly 1,500 visitors. Even magazine and television reporters sought interviews with the organizers to feature the special event.



Art Fest Explores Creativity of Campus Art Scene

The NTU Art Festival is always one of the biggest and most exciting events on NTU's annual campus calendar. Each year for the entire month of May, the festival gives free reign to artistic creativity through a diverse offering of interactive activities, forums, exhibitions, and performances.

The 2015 NTU Art Festival started on a high note with a festive opening ceremony on the evening of May 8. The ceremony commenced with NTU President Pan-Chyr Yang leading a parade of twirling drill teams and a sonorous marching band down Royal Palm Boulevard. The parade led to the stage where the nighttime festivities continued with fun and innovative performances. The night's lineup included a group mixing dance, hip hop, and jazz, an a cappella singing troupe, a digital dance performance combining high-tech projection art with modern dance, and popular local rock bands Cosmospeople and The 929 Band. The performances drew a huge turnout of more than 5,000 people from both on and off campus.

Having reached its 21st anniversary, the NTU Art Festival introduced a diversity of new and cutting-edge elements and approaches this year. Besides opening with a parade, the festival featured the Concept House at the Main Gate, a menu-free restaurant integrating delicious cuisine with artful living, the Student Activity Center's rose-color conceptual art exhibition, a market that also offered theater performances, as well as presentations of digital media art.

The month-long festival came to a close on the same festive note with which it started. On May 30 and 31, the festival invited the spectators to become a part of the art by exploring a convoluted maze as well as taking in a dazzling light art show right next to the Luna Pond. The festival was a great success, attracting throngs of people to experience the beauty and creativity of our campus' art scene.



▲ Students evoke a stirring sense of awe through a demonstration of their drill team skills.

▶ A performance group wows the audience with its dynamic singing and sexy dance moves at the NTU Arts Festival's opening ceremony.





Prof. Li-Chuan Ou of the Department of Chinese Literature completed her new masterwork *A Grand View of the Red Chamber: General Introduction* in December 2014. Published by NTU Press, the new book is the first in a series that the respected Redologist will present on her many years of in-depth research into the Chinese classical novel, *Dream of the Red Chamber*.

NTU Press invited Prof. Ou to serve as the keynote speaker at her book's official release ceremony at this year's Taipei International Book Exhibition in February. During her speech, the

literary scholar shared with the audience her fascinating research achievements as well as the profound thoughts and inspiration readers can find within the pages of this great literary work of the Qing dynasty.

Prof. Ou described the *Dream of the*

LITERARY SCHOLAR PUBLISHES FIRST BOOK IN SERIES ON *DREAM OF THE RED CHAMBER*

Red Chamber as a monumental tragic symphony within which all of the beautiful and wonderful things in life are destined for disillusionment, and paradise itself fated to collapse.

Prof. Ou is not just an outstanding research scholar; she is a dedicated educator, as well. In addition, the time and effort Ou invests in her students earned her the Educator Award at The Open Education Awards for Excellence in April.

A Grand View of the Red Chamber Dream: Maternal Figures, the second book in Prof. Ou's series, will be released by NTU Press in the second half of the year.





NTU KIDS MUSEUM INSPIRES LOVE OF SCIENCE

In the fall of 2013, the NTU Life Science Museum initiated a series of activities designed specifically for children as part of the NTU Kids Museum campaign. Working with the support of the Ministry of Culture, the Kids Museum is now moving into its fourth season.

The fun and inspiring educational activities were recently introduced at the Gallery of NTU History. Among the activities include "Insect Camouflage," "Origami Flower Vase," "The Magic of Plant Survival," "The Little Yeast," and "Picture Book Theater." These hands-on activities have attracted the participation of more than 500 children and parents so far. Meanwhile, the Kids Museum website has also received over 15,000 visits since its establishment.

The NTU students working at the Kids Museum as instructors point out that in using games, pictures, origami, and hands-on activities, they are able to translate the hard, cold knowledge of the life science laboratory into fun and exciting information that will inspire the children's love of science. The student instructors view their work with the curious kids as an important way to share their knowledge of science with society.



內付
國資已
臺北郵局許可證
臺北字第4272號

Publisher: Pan-Chyr Yang
Editorial Consultant: Lin-lin Ku
Editor: Ta-Te Lin
Executive Committee: NTU Secretariat
Published by National Taiwan University
Tel: 886-2-3366-2032
Address: No.1, Sec.4, Roosevelt Road, Taipei, 10617 Taiwan
Website: <http://ntuhighlights.ntu.edu.tw/>
中華郵政臺北雜字第1146號執照登記為雜誌交寄