

Published by National Taiwan University
Website: <http://homepage.ntu.edu.tw/~secretor/ntunewsletter>

NTU



NEWSLETTER

April 2013 / No. 35

NTU, Johns Hopkins sign cooperation MOU

Experimental Farm Promotes Organic Crop

Int'l Exchange Programs Develop Global Views

NTU Hospital Service Goes Mobile

Special Report
Preventive Medicine



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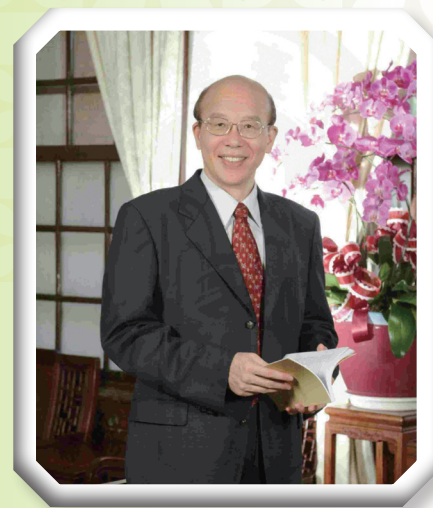
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NTU AT A GLANCE

Mountain Farm Drops Chemicals and Goes Organic



From the President's Office

I am delighted to share some thrilling news with all of our students and faculty: *Times Higher Education* has ranked NTU among the top 51 to 60 universities in its 2013 World Reputation Rankings. This is the university's highest placement in the rankings to date.

In 2008, when we declared our goal of joining the ranks of the world's top 100 universities, everyone thought it would be a mission impossible. Nevertheless, due to the efforts of all students and faculty, NTU has indeed entered the ranks of the top 100 in international rankings in recent years. As for previous THE World Reputation Rankings, NTU enjoyed rankings in the 81st-90th-place bracket in 2011 and the 61st-70th-place bracket in 2012. Now we have climbed to the 51st-60th-place bracket.

Many have taken exception to NTU's pursuit of international rankings. Yet, these people overlook the fact that this is an era of globalization, and NTU's students often need to compete and seek employment internationally. Our outstanding rankings allow our students to win at the starting gate and raise the visibility of academics in Taiwan. Therefore, we absolutely must take advantage of international rankings in order to enhance the competitiveness of NTU's students.

Joining the top 60 is hardly our final goal. In-coming NTU President Pan-Chyr Yang has already proclaimed his goal of moving into the top 50. I believe this is a goal NTU is absolutely certain to accomplish, and I look forward to the university ascending to the top 50 and even top 20.

李嗣涔

President
Dr. Si-chen Lee

AZALEA FESTIVAL SHOWCASES CAMPUS LIFE FOR HIGH SCHOOL SENIORS

In March, NTU's school flower, the azalea, bursts into blossom, heralding the return of spring and brightening every corner of the campus. In celebration of this vibrant explosion of color, the university organizes the annual Azalea Festival, which encompasses an entire month of exciting events showcasing life on the NTU campus.

On March 16, NTU President Si-Chen Lee presided over the opening ceremony of this year's Azalea Festival, Department Expo and Student Club Expo. In his address to the audience, President Lee said, "I will leave my post as president in just three months. Former President Wei-jao Chen first proposed the idea of the Azalea Festival in 1996, and the Secretariat Office has been organizing the festival for 17 years now. The festival takes place after the release of the results of the national university entrance exam each March. Its primary purpose is to give high school seniors an introduction to the departments in which they are interested and to attract the finest students in Taiwan to enroll at NTU. Moreover, the festival takes advantage of the blossoming of the azaleas to showcase the beauty of the campus and the university's outstanding learning environment."

President Lee was also delighted to report that *Times Higher Education* has ranked NTU among the top 60 universities in its 2013 World Reputation Rankings, and that in-coming NTU President Pan-Chyr Yang has already declared his goal of moving the university into the ranks of the top 50. President Lee called on the high school seniors to make NTU their first choice.

Ever since the first Azalea Festival was first held in 1997, the annual festival has drawn thousands upon



thousands of students and family members from all over Taiwan each year. At this year's Department Expo, held in the NTU Sports Center, 54 NTU departments set up booths to introduce their courses, professors and development plans to prospective students. Department representatives at the colorful booths provided visitors with precious information about the university's many departments. The Student Club Expo filled the areas outside the NTU Sports Center and along nearby roadways, featuring booths of almost 160 clubs. The clubs organized colorful performances and fun activities to show the high school students the exciting diversity of extracurricular activities NTU students enjoy.

Besides these events, the Azalea Festival featured a wide range of arts and culture events. The month-long art exhibition, "Ten Landscapes of National Taiwan University," showcased ten sketches by Prof. Fon-Jou Hsieh to illustrate the NTU's history and the beauty of the campus. For the Azalea Festival Museum Concert, renowned Taiwanese violinist Chia-Hong Liao was invited to perform "Spring" and "Summer" from Vivaldi's *Four Seasons*.





Beam-Raising Ceremony Held for New Research Building

NTU President Si-Chen Lee presided over a ceremony for the symbolic raising of the final beam of the Building for Research Excellence on the Shui Yuan Campus on February 21. The building is scheduled for completion at the end of this year.

President Lee noted that, although NTU is home to world-class researchers, the lack of adequate space for research has presented challenges to NTU's mission of becoming one of the world's most elite universities. The new building will stand ten stories tall and have two basement levels. Each floor will provide approximately 1,132 square meters of space for research.

NTU and Johns Hopkins Sign Cooperation Agreement



The Johns Hopkins' delegation headed by President Ronald Daniels joins NTU officials for a group photo.

NTU and Johns Hopkins University signed an important memorandum of understanding for academic cooperation in December 2012. This MOU will lead to more substantive cooperation projects and frequent exchanges. The areas of cooperation covered in the agreement include exchanges in information sciences and publishing, exchanges of professors and researchers, and research cooperation.

Johns Hopkins President Ronald J. Daniels led a delegation to visit NTU in June. President Daniels was accompanied by Vice Provost for International Programs Pamela Cranston, Dean of the Bloomberg School of Public Health Michael J. Klag and Associate Dean for External Affairs Joshua D. Else. The delegation met with NTU President Si-Chen Lee and Dean for International Affairs Hsiao-Wei Yuan, and discussed cooperation details with Dean of the College of Public Health Wei J. Chen.

In 2009, the NTU College of Public Health and the Johns Hopkins Bloomberg School of Public Health inked an agreement to pursue active exchanges. The NTU College of Bioresources and Agriculture is also currently engaged in exchanges with Johns Hopkins. More than 30 NTU professors are Johns Hopkins

alumni. They work in the College of Science, College of Social Sciences, College of Medicine, College of Bioresources and Agriculture, College of Public Health, College of Electrical Engineering and Computer Science and College of Life Science.

Ranked 16th in the world, Johns Hopkins is among the world's most prestigious research universities. The first institution to establish a college of public health in the United States, it is also ranked fourth and fifth internationally in the fields of medicine and life science, respectively. Johns Hopkins has cooperated with such United States government agencies as the National Science Foundation, National Institutes of Health, National Aeronautics and Space Administration and Department of Defense, and has received over US\$1.7 billion in research funding. The NSF has listed Johns Hopkins as the university with the largest scientific research budget in the United States for 32 years in a row. Thirty-six Johns Hopkins alumni are Nobel Prize laureates. In 2013, current New York City Mayor Michael Bloomberg donated US\$350 million to his alma mater. Having donated a total of over US\$1.1 billion, Mayor Bloomberg is the largest contributor in the university's history.

Former President Chien Honored in Memorial Lecture



Honored guests of the memorial lecture and unveiling ceremony pose for a group photo. From left to right, they are NTU LeCosPa Director Pisin Chen, Academia Sinica Academician Shie-Ming Peng, Academia Sinica Vice President Chien-Jen Chen, NTU President Si-Chen Lee, NTU Physics Prof. George Wei-Shu Hou, Frederick Foo Chien and his wife, and CASE Director Jwu-Ting Chen and his wife.

The Lecture in Honor of Former President Shih-Liang Chien and the Sign Unveiling Ceremony for the Center for the Advancement of Science Education (CASE) were held jointly at NTU on February 18. NTU organizes annual academic lectures in commemoration of former President Chien, a renowned chemist and educator who served as president of Academia Sinica after leaving NTU. The unveiling ceremony marked the official relocation of CASE to the International Conference Hall in the newly renovated Shih-Liang Hall, which is named in honor of the former president.

Among the honored guests attending the events were NTU President Si-Chen Lee, NTU Vice President for Academic Affairs Ching-Hua Lo and other top-level NTU officials as well as Academia Sinica Vice President Chien-Jen Chen and Academia Sinica Academicians Shie-Ming Peng and Tung-Bin Lo. Two of former President Chien's sons, notable figures themselves, also attended as honored guests. Robert Chien is a former Minister of Finance of Taiwan, while Frederick Foo Chien is a former Minister of Foreign Affairs and sits on the board of directors of Cathay United Bank.

After noting that this year's lecture marked the 105th

anniversary of his father's birth, Frederick Chien went on to thank CASE Director Jwu-Ting Chen for his years of dedication to the promotion of science education, and credited that dedication with the holding of the day's events. He said his father devoted his life to the popularization of science, and that it is a perfect match for CASE to be located in Shih-Liang Hall.

Academia Sinica Vice President Chien-Jen Chen said of former President Chien, "A great man has long passed away, yet his example lives on." Noting that the former president headed NTU for 20 years and Academia Sinica for 13 years, Vice President Chen said Chien continues to be recognized universally for his contributions in Taiwan and internationally.

CASE was established in October 2008. Its main mission is to take advantage of the university's academic and scientific resources so as to ensure all students develop a good command of basic science knowledge. CASE



uses Internet broadcasting, multimedia technology and creative educational activities to provide both NTU students and the general public with engaging content that integrates cultural and scientific elements.

Prof. George Wei-Shu Hou of the Department of Physics presented this year's memorial lecture, which was entitled "Quarks and Origins of the Universe." Prof. Hou began his lecture with Ernest Rutherford's winning of the Nobel Prize in Chemistry and continued to probe his topic by discussing such famous physicists as Yoichiro Nambu, Murray Gell-Mann and Richard Feynman. He went on to speak about the disappearance of antimatter in the universe and concluded by discussing the existence of fourth generation quarks.

Molecular Imaging Center to Pursue Discoveries in Preventive Medicine



On February 25, a special ceremony was held for the NTU Molecular Imaging Center to mark the unveiling of the center's official sign and the start of operations at the center's new laboratory on the NTU Main Campus.

Speaking at the ceremony, NTU President Si-Chen Lee pointed out that the 21st century is the century of preventive medicine and that the detection of tiny changes in the body before they occur is certain to become one of the main directions for development in the world of medicine. President Lee said he looks forward to NTU making many great discoveries in this area and that the Molecular Imaging Center is sure to generate discovery after discovery.

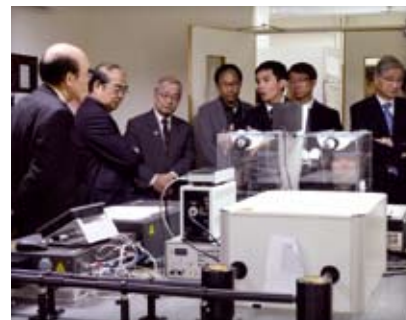
President Lee also shared his personal experience regarding the development of biomedical molecular imaging research: "My most vivid impression is from the early 1990s just following the dissolution of the Soviet Union. President Lee Teng-hui desired that we establish contacts with Russia and I was chairperson of the Department of Electrical Engineering. Therefore, I organized a three-person delegation to Moscow State University where we visited the university radio science research

institute. At the time, the institute was using every band of the electromagnetic spectrum to observe images of the human body. This included even viewing chemical reactions that occur when air comes into contact with the surface of the body as well as the infrared frequency spectrum emitted by the body." They had found that the health condition of the body can in fact be revealed by examining the body's electromagnetic spectrum.



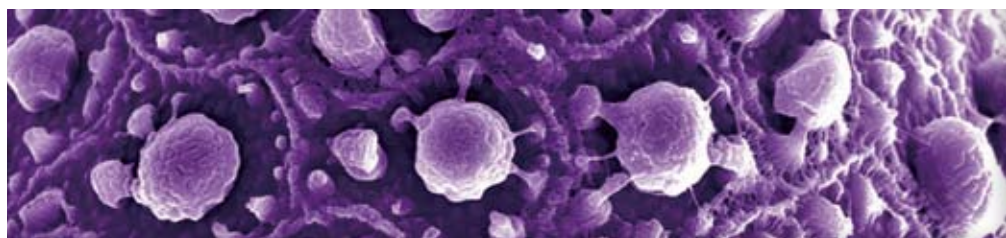
President Lee continued by noting, "Russia's radio science microwave technology was unmatched in the world and they were observing microwaves emitted by the body. They believed that infrared radiation did not provide a deep enough view because it was only near the surface of the skin. Microwave

radiation however could be emitted from internal organs and therefore allowed the Russians to observe temperature changes in the body and detect diseases in their early stages. At that time, I was completely surprised."



National Dong Hwa University President Mau-Kuen Wu told the audience that he looked forward to the center pursuing not only basic scientific research but also enhancing the development and operation of the entire molecular imaging production chain.

The Molecular Imaging Center director, Prof. Chi-Kuang Sun, first expressed his appreciation for the tireless efforts of the numerous scholars and predecessors that worked to establish the center. He then asked how, from a post-genomic molecular medicine perspective, we are to advance humanity's basic comprehension of biomedicine as well as provide earlier, more precise and more personalized medical imaging detection. He added that this is not simply an academic issue, but a clinical one as well.



NTU Hospital Patients Use Mobile Banking App to Register, Pay Fees



NTU Hospital and Taiwan Cooperative Bank have teamed up to develop a mobile Internet banking application for the convenience of the hospital's patients. Patients who sign up for the app and certification with Taiwan Cooperative Bank will enjoy the convenience of using their smart phones to register for clinic visits as well as pay clinic fees immediately after seeing their doctors. This will be a benefit to patients who do not wish to wait in line to pay fees or have forgotten to bring money. Furthermore, the new application permits patients to look up their prescriptions and test results, meaning they no longer need to keep track of paper documents. This great new app was introduced to the public on March 1, 2013.

Years ago, NTU Hospital and Taiwan Cooperative Bank gained experience working together when they collaborated to introduce self-operated kiosks that allowed patients to register and pay fees. With the growing prevalence of smart phones, people are increasingly relying on these handy devices in all areas of their daily lives, such as searching for information, making reservations and storing personal data. This trend inspired the hospital and bank to join up once again to design this new mobile Internet banking app.

The app provides a range of useful services. Among these, it allows patients to make appointments and register for clinic visits, search registration information, check their numbers in line and the number the doctor is currently seeing, pay their or others' fees and same-day fees, check the amount they have already paid, set account numbers from which payments are to be deducted, as well as use a barcode storage space.

Moreover, the app offers a search function for checking prescription and test result information. Patients can use the function to check the last time they made a clinic visit and paid fees as well as view all of their clinic information of the preceding three months. This full range of clinical information includes appointment and registration information, scheduling and status information for

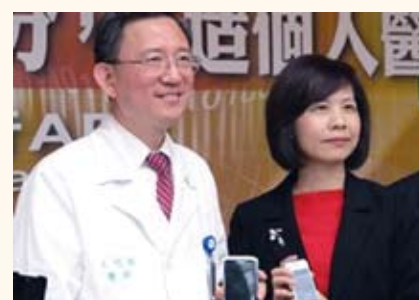
NTU Hospital Vice Superintendent Ming-Chu Wang (fifth from right) and Taiwan Cooperative Bank Executive Vice President Mei-Tsu Chen (fourth from right) join the developers of the new mobile banking app for a group photo.



tests, information and usage methods for prescribed medicines, and scheduled tests, checkups and imaging and radiology procedures.

The services provided through the app make it convenient for patients to check and understand their medical test information and see whether their results have come out, and then select an appropriate day to return for a doctor's appointment. The app provides the added benefit of reducing the use of paper documents. Not only does this conserve energy and reduce carbon emissions, it means patients do not need to hold on to easily lost paper documents.

In addition, patients can also use the application to build their own personalized medical databases that can be used for health management purposes. With its comprehensive range of services, the app



marks a major milestone in the development of personalized medical information clouds.

23 Professors Receive 2012 NSC Outstanding Research Award

The National Science Council has recently announced the recipients of its 2012 Outstanding Research Award. The university is pleased to learn that the NSC named a total of 23 NTU professors as recipients of this prestigious award. NTU's premier position among universities in Taiwan is highlighted by the fact our professors make up 31.5% of the award winners. In addition to NTU's Outstanding Research Award recipients, Prof. Mei-Lin Wu of the Department of Physiology and Graduate Institute of Physiology at the College of Medicine has been named a recipient of the 2012 NSC Outstanding Research Fellow Award.

The recipients of the 2012 Outstanding Research Award and their fields of specialization are listed below.

Tay-Sheng Wang, **Law**

Kuo-Chuan Ho, **Chemical Engineering**

Chung-Chih Wu, **Photonics and Optoelectronics**

Chun-Chieh Wu, **Geosciences**

Pai-Chi Li, **Medical Engineering**

Chi-Kuang Sun, **Photonics and Optoelectronics**

Susan Shur-Fen Gau, **Psychiatric Epidemiology**

Shang-Tzen Chang, **Forestry, Water**

Conservation and Ecology

Wen-Chang Chen, **Polymer Engineering**

Sheng-Syan Chen, **Finance**

Jung-Kai Chen, **Mathematics**

Yi-Chung Shu, **Civil and Hydraulic Engineering**

James Chih-Hsin Yang, **Basic and Clinical Oncology**

Su-Ling Yeh, **Psychology**

Chen-Yuan Dong, **Soft Matter and Biophysics**

Chan Nei-Li, **Structural Biology**

Wanjiun Liao, **Communication Engineering**

Ru-Shi Liu, **Inorganic Material Chemistry**

Tsai Keh-Chyuan, **Structural Stress**

Din-Ping Tsai, **Physics**

Ming-Ching Luoh, **Economics**

Ming-Liang Hsieh, **Art Studies**

Sung-Tsang Hsieh, **Neurology**

Hospital Official Named Top Five CIO for Planning Integrated ITC System

NTU Hospital Vice Superintendent Ming-Chu Wang is the brains behind the planning and management of a major information technology systems integration project that marks the beginning of a new era in healthcare communications at the hospital.

The inter-platform project includes an RFID (radio-frequency identification) medical instruments positioning and tracking system, electronic whiteboard dynamic management mechanism for patient wards, electronic medical records system for intensive care units, and automatic testing processes and testing data system. The project utilizes advances in information technology to better meet people's healthcare needs.

Vice Superintendent Wang has drawn the attention of Taiwan's *CIO IT Manager* magazine and China's *IT Management World* magazine for his exceptional work in managing this major information and communications technology project. The two publications have named Vice Superintendent Wang one of their Top Five Chief Information Officers in a report they jointly published on outstanding CIOs in Taiwan, Hong Kong and China in 2012. The magazines commend Wang for using technology to create positive interactions in doctor-patient relationships.

Wang's systems integration project simplifies procedures and reduces pressure on medical staff. Its effective and user friendly information services raise the quality of medical care by enhancing the effectiveness of communications between patients and staff. Wang has demonstrated that NTU Hospital is not only Taiwan's leading education and research hospital, it provides the finest healthcare for the people of Taiwan, as well.

An interview with Vice Superintendent Wang (in Mandarin) that came out in the January issue of *CIO IT Manager* is available at http://www.cio.com.tw/article_in.aspx?aid=755.



Geoscientist to Receive Prestigious Prize from French Geological Society



NTU Prof. Bor-Ming Jahn of the Department of Geosciences has been formally notified that he is to be awarded the prestigious 2013 Prestwich Prize of the Geological Society of France in recognition of his contributions to the field of geology. Prof. Jahn will personally accept the award at the society's annual meeting in Paris on May 23. Similar to the Geological Society of Japan's International Prize, the Prestwich Prize is presented to non-French citizens who have made outstanding contributions to the field of geology.

Joseph Prestwich was a renowned English geologist who was an expert on the geology of the Tertiary Period near London and Paris. Prestwich served as chairperson of the fourth International Geology Conference in London in 1888 and deputy director of the Geological Society of France in 1895.

The Geological Society of France established the Prestwich Prize in 1903. It presented the award once

every three years until 2001, after which it has handed it out only once every four years.

After graduating from the NTU Department of Geology in 1963, Prof. Jahn earned his Master's degree in Geochemistry at Brown University in 1967 and PhD in Geology and Geophysics (Geochemistry) at the University of Minnesota in 1972. From 1972 to 1976, he worked as a National Research Council postdoctoral fellow at the NASA-Johnson Space Center and Lunar Science Institute in the United States. Prof. Jahn was a professor at the University of Rennes 1, where he became director of the Institute of Geology, in France from 1976 to 2003.

Prof. Jahn is a chair professor in the Department of Geosciences and was elected an Academia Sinica academician in 2012. He specializes in the use of geochronology and isotope and trace element geochemistry to investigate the formation of rocks and the structure of the Earth. Prof. Jahn serves as the chief editor of the Elsevier-published *Journal of Asian Earth Sciences* and sits on the editorial boards of numerous Science Citation Index listed journals.

Environmental Engineer Elected ASCE Fellow

Prof. Shang-Lien Lo of the Graduate Institute of Environmental Engineering has been elected a fellow of the American Society of Civil Engineers. Prof. Lo was the only scholar from Taiwan or China to be named an ASCE Fellow in 2012.

The primary reason behind Prof. Lo being named an ASCE Fellow was his publication of numerous papers, theoretical and practical, in water quality control and waste water treatment. He has obtained 18 patents based on his research work.

Internationally recognized for his contributions to engineering research, Prof. Lo is a member of the board of directors of the International Water Association as well as chairperson of the IWA's Asia Pacific Regional Group (ASPIRE) Conference. He sits on the boards of numerous ASCE committees.



NTU Earns Unanimous Approval in Evaluation of Internationalization Efforts



NTU has received further confirmation that the energy and resources it has devoted to the internationalization of the campus are producing significant results. FICHET (Foundation for International Cooperation in Higher Education of Taiwan) recently released the results of its 2012 University Internationalization Evaluation. Of the twelve institutions that applied to be assessed, three including NTU received a “unanimous approval” rating, the highest rating, while the

other nine were rated “needing further improvement.” This is the first time NTU has applied to undergo this FICHET evaluation.

While overseas student recruitment and learning environment had been stressed in its earlier surveys, FICHET introduced five main indicators under the theme of student-oriented planning for the 2012 evaluation. These included the characteristics of a university’s internationalization goals, a university’s promotion of planning

and student guidance regarding internationalized curricula for local and overseas students, administrative support for the living environment of international students, the ability of local students to study and interact internationally, and a university’s English website.

NTU drew a rating of “not bad” for the first two indicators and garnered a “very good” for the latter three. Moreover, earning the “unanimous approval” rating means the university will be added to the Study in Taiwan website (<http://www.studyintaiwan.org>) for recommendation as a study destination for overseas students.

FICHET has been organizing similar evaluations for universities that apply to undergo evaluation each year since 2009. As of 2011, the education organization had assessed a total of 53 institutions.

University Administrators Discuss International Affairs in Japan

Director Jean Lin of the Office of International Affairs International Programs Division represented NTU at the Eighth University Administrators Workshop at Kyoto University in January. The annual meeting provides a platform for international affairs administrators at East Asian universities to network and discuss ideas about the current situation and future challenges regarding their international operations.

During the workshop, Director Lin delivered a speech entitled “Dispelling common misconceptions about the functions of international offices: clarifying the roles of National Taiwan University’s Office of International Affairs.” Not only



did Director Lin’s address resonate strongly with the other university administrators, many of them sought her out to exchange ideas with her after the meeting.

The workshop took place over two days and centered on the theme of “International Offices as a Driving Force for the Cultivation of Global Talent.” On the first day, sessions were held on the three subthemes of “New Initiatives to Cultivate Global Human Resources,” “New Strategies

in International Relations,” and “The Roles of Skilled Administrative Staff and International Offices in University Internationalization.” The subtheme of “Student Exchange Promotion and Infrastructure Development” occupied four parallel sessions on the second day.

This year’s workshop attracted over 100 representatives from 31 universities in Japan, Taiwan, South Korea, China, Hong Kong, Vietnam, Thailand, Malaysia, Singapore, Indonesia and the Philippines. Most of the attendees were administrators at partner universities of Kyoto University or universities that are members of the Association of Pacific Rim Universities or the Association of East Asian Research Universities.

CHINESE EXCHANGE STUDENT SHARES FOND IMPRESSIONS



By Zhuoyi Sun, Harbin Institute of Technology

It took me a long time to start writing this piece about my experiences as an exchange student at NTU, for I always feel a sense of longing for my time as an exchange student.



To me, Taiwan is a mysterious and refined island. It is steeped in traditional Chinese culture and yet bears the imprint of Japan and the United States. Then, there is the local culture. Taiwan is truly a land of blending.

NTU was the first place to receive me, and it is the place where I experienced Taiwanese culture the longest. When I first arrived, the people who received me were a group of enthusiastic NTU volunteers. They did their best to provide helpful services to international students and they were also very curious about the students from China.

NTU offers many varieties of courses. Besides the basic professional courses that everyone knows about, NTU offers many courses that I heard of for the first time there. For instance, "Introduction to Forest Biodiversity" is a course in which students go to different places around Taiwan to conduct geological surveys. (Unfortunately, due to limits on the enrollment and so many students signing up, I was unable to take the course.) There are also courses in metaphysics, Thai, negotiation as well as Mongolian. I sat in on a few general education courses. They were interesting and in depth, and stimulated me to develop my own ideas more thoroughly.

What most impressed me the most was the NTU Library. Its resources are broad and abundant. I couldn't bear leaving it—this was the feeling of using a five-star library. I should also mention the great range of campus activities, as well. NTU's student clubs are indispensable. Countless clubs came out to introduce themselves at the start of the semester. It was a dazzling sight with booths lining the entire length of Royal Palm Boulevard as well as the



surrounding areas. You don't need to worry about not finding partners you can share your interests with.

During this beautiful time in Taiwan, I made good friends, and met thoughtful, patient teaching assistants, and volunteers and classmates who spared no effort in helping me. In Kaohsiung, I got to know a new family, and came away with new knowledge and memories of beautiful scenery as well as a fresh sense of youth. I wonder if the trees on the NTU campus whose fallen leaves have fluttered through the air have sprouted new leaves. Perhaps what they have sprouted indeed are the deep and fond memories of us exchange students.

Japanese Exchange Student Makes Friends Through Music



I am Momoka Kabuki, a third-year student at Soka University in Japan. Last year, I had the good fortune of being accepted to NTU as an exchange student.

Yet, my studies didn't go smoothly at first because I had trouble keeping up with my classes. Therefore, I started to prepare more thoroughly and speak up more in class. I also held language exchanges with students from the Department of Japanese to improve my Mandarin.

I studied music as a child and had hoped to meet others through music, so I joined the NTU Symphony Orchestra. To me, each practice was a challenge. And, besides the performances, I found that all of the other orchestra members were Taiwanese students who could not speak Japanese. Consequently, I wrote down the names, characteristics and birthdays of all of my friends, and worked desperately to memorize everyone's name and appearance.

Now, my fellow orchestra members have become my best friends.

I made around 200 friends in Taiwan. Some of them have even expressed a desire to study at Soka University and develop a bond between Soka and NTU. After returning to Japan, I will tell everyone how wonderful NTU is and serve as a bridge between Japan and Taiwan.

Canadian Exchange Student Declares NTU Unforgettable



I am Sandy Shu Shiu Yu from the University of Toronto. My time at NTU has been unforgettable and life changing. Besides the knowledge I acquired, I learned a lot about life.

I took 16 credits. This was a heavy load compared to other exchange students, but I studied hard and ended up with an "A" average. I would recommend that exchange

students take 10 credits so they have more time for travelling and exploring.

Besides my studies, I travelled a lot with my friends. We went to Kenting, Taroko Gorge and Sun Moon Lake. I also travelled to Korea and the Philippines. The night life was also a highlight of my trip, especially the night markets. My

favorite was the Shilin night market and I also really liked Shida.

My goals for this exchange were to make new friends, challenge myself in life and excel in academics. I feel I have accomplished these goals. I really enjoyed studying in Taiwan and I strongly encourage other students to study at NTU and have the same experiences I enjoyed.

DOCTORS PUBLISH IMPROVED TREATMENT FOR PNEUMOTHORAX IN *THE LANCET*

A major two-hospital study headed by NTU Hospital Superintendent Pan-Chyr Yang, president elect of NTU, has demonstrated a more effective initial treatment for primary spontaneous pneumothorax that augments the current standard treatment to achieve a lower rate of recurrence. An article detailing the study was published in the February 18 issue of the prestigious medical journal *The Lancet*.

Spontaneous pneumothorax refers to a build-up of air or gas in the space between the lung and the chest wall. It tends to affect young men of tall, thin stature and may cause death in serious cases. In Taiwan, more than 2,000 people undergo treatment requiring aspiration and drainage via a chest tube or even surgery each year.

The standard treatment established by medical societies in the United States, Britain and Europe for first-time primary

spontaneous pneumothorax recommends removing the air with a syringe or chest tube. However, the rate of recurrence of this approach reaches 50%, which means patients are often required to return for emergency treatment. This leaves room for improvement.

The treatment method recommended by Superintendent Yang and his colleagues at the Department of Surgery, Department of Internal Medicine, Department of Emergency Medicine and Clinical Trial Center is to follow up the standard treatment of aspiration and drainage with minocycline pleurodesis, which involves the injection of minocycline through a tube into the space between the lung and the chest wall to seal it off. While minocycline is an antibiotic, the minocycline pleurodesis procedure also effectively reduces the recurrence of pneumothorax.

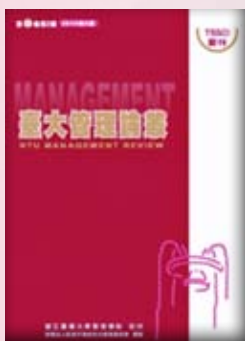
From 2006 to 2012, doctors at NTU Hospital and Far Eastern



Ⓐ The research team behind the improved treatment for pneumothorax comes together for a group photo.

Memorial Hospital carried out a clinical trial in which they compared the effectiveness of the standard procedure and the augmented procedure. In all, the doctors treated 214 patients, 106 in the minocycline group and 108 in the control group. Their findings showed that aspiration and drainage followed by minocycline pleurodesis is not only a simple and safe treatment, it achieves a reduced rate of recurrence (29% compared to 49%) as well as a lower rate of additional treatment (29% versus 44%).

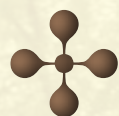
NTU MANAGEMENT REVIEW ADDED TO SCOPUS



The *NTU Management Review* has been added to SciVerse Scopus, one of the leading bibliographic databases for academic journal articles. Scopus announced the decision on February 11 following a rigorous two-year review process. Scopus, Web of Science, and Google Scholar are currently the world's three most important bibliographic databases.

The management journal's inclusion in Scopus places it in a class with the world's leading management journals and facilitates its role as an important platform for exchanges between scholars in Taiwan and abroad. This move will shine an international spotlight on the excellent research being conducted in management here in Taiwan.

The *NTU Management Review* has published more than 400 articles since its founding in 1990. Please visit the journal's English website at <http://review.management.ntu.edu.tw/ntucmsen/>.



Liugongjun Pool Preserves a Patch of Wetland Nature in the City

Who would have imagined that a large and complete paddy field and wetland could exist in the middle of this city built of concrete and steel? Liugongjun Pool, situated to the right of the NTU Library, is just such a beautiful and pristine environment.

Years ago, the College of Bioresources and Agriculture used idle land on the NTU Experimental Farm along Chou-Shan Road and coordinated with the Liugong Canal restoration project to create Liugongjun Pool. This wetland area helps maintain ecological diversity while also serving as a memorial to the Liugong Canal. It has many additional uses related to its educational value and scenic beauty.

The paddy field and wetland take on different appearances with each season, and they are home to a diversity of flora and fauna. Rice, *Saururaceae*, *Barringtonia racemosa*, *Pistacia chinensis*, *Pistacia chinensis* and *Macaranga tanarius* are among the aquatic plants that thrive here. Many species of birds make this area their habitat, including the Common Moorhen, White-breasted Waterhen, kingfishers, White-rumped Munia, Light-vented Bulbul and Black-browed Barbet. Insects and amphibians also flourish in this watery environment.

In addition to supporting a diverse ecology, Liugongjun Pool is of historical significance, as well. It is a section of Taipei's former Liugong Canal. Farm owner Kuo Hsi-liu commenced construction of the irrigation system in

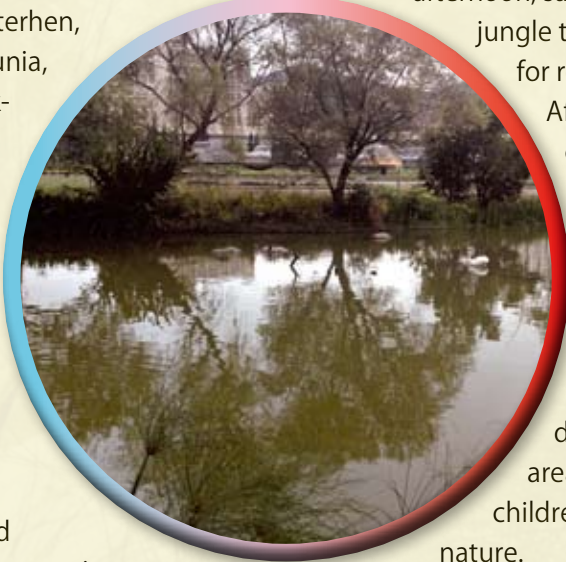
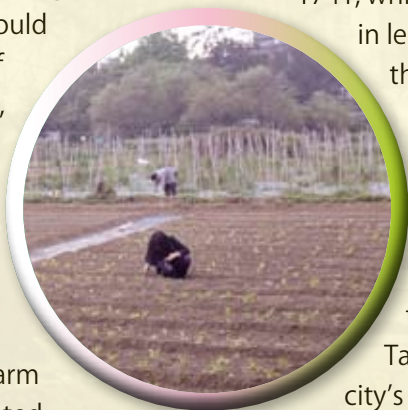
1741, which ultimately exceeded 20 kilometers in length and traversed what came to be the NTU campus. The canal sustained agriculture in the Taipei Basin for generations. Now, the original canal has all but vanished, but the university is delighted to have preserved a section of the waterway that allows the people of modern Taipei to recall the canal's role in the city's early history.

A tranquil oasis in the midst of Taipei's frenetic urban environment, Liugongjun Pool is an attraction for people from all walks of life.

It is not uncommon to see students who are exhausted from hitting the books escape from the library to seek refuge and fresh air near the pool. On weekends and holidays, neighborhood parents bring their children to learn about the pool's ecology. The Experimental Farm even holds special on-site tours to introduce the wetland area's ecology to students and residents.

A Mrs. Chuang, who was enjoying Liugongjun Pool with her two children one sunny weekend afternoon, said the city was just a concrete jungle that offered no good places for relaxation and recreation.

After discovering that NTU campus had redeveloped this patch of nature, she began to take walks here with her children to observe the wetland plants and animals. Mrs. Chuang said that she appreciated the way NTU designed and preserved the area because it gave her city-bred children a chance to get close to nature.



Graduate Students Win Best Paper Awards at EU Studies Conference



Participants pose for a group photo at the end of the 2013 Asia Pacific EU Center Graduate Students Conference.

Two graduate students from the Department of Political Science walked away with two of only three Best Presentation Awards handed out at the 2013 Asia Pacific EU Center Graduate Students Conference, held at Kyushu University in Japan, February 4-6. Thanks to the pair's achievements, the Taiwan delegation came away with the most awards of any country at the conference.

With a total of 28 papers presented at the conference, Po-Hao Wang's paper "European Union and the Linguistic Rights of the Kurdish People in Turkey" came out on top in the "History and Culture" category while Hui-Chun Yeh's paper "Tentative Study on the Power Expansion of the European Council President" won in the "Law and Politics" category.

This conference is organized annually by European Union Centers in the Asia Pacific region to promote EU studies to give graduate students the opportunity to present their academic achievements. The EU Center in Taiwan hosted the second conference here at NTU, February 22-23, 2011, and the EU Center at Pusan National University organized the third conference in Busan, South Korea, February 2-3, 2012. The New Zealand EU Centers Network will host the fifth conference in 2014.

The theme of this year's conference was "Achievements, Lessons and Challenges of the EU." The conference drew graduate students from the Asia-Pacific region, including Japan, Taiwan, South Korea, Singapore, New Zealand, Australia, Thailand, Hong Kong and Macao. In all, 28 papers on topics related to EU politics, law, history, culture and economics were presented.

The Taiwan delegation to this year's conference was headed by Director General Lei Yang of the EU Centre at National Sun Yat-sen University. The delegation included Executive Director Marc Chia-Ching Cheng of EU Center in Taiwan and a team of four graduate students from the NTU Department of Political Science and three from the Department of Diplomacy at National Chengchi University.

The EU Center in Taiwan is organizing a national EU Center

The research team behind the improved treatment for pneumothorax comes together for a group photo.



graduate student conference to be held on May 24. The best papers at the conference will be recommended for submission to the regional conference in New Zealand next year.

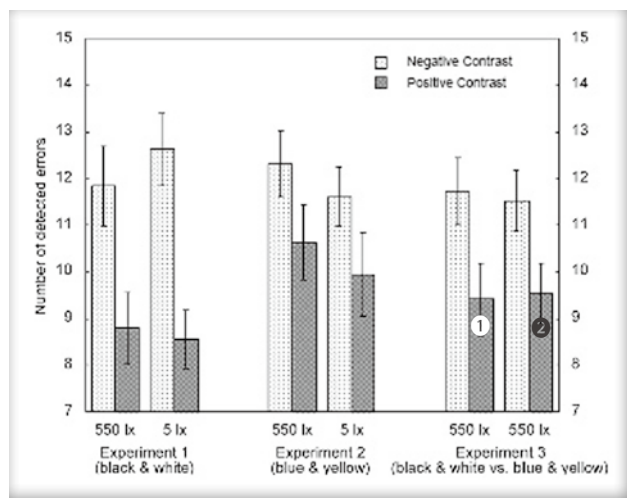
Based at NTU, the EU Center in Taiwan was established in 2008 by a consortium of universities headed by NTU. The consortium includes National Chengchi University, National Chung Hsing University, Fu Jen Catholic University, Tamkang University, National Sun Yat-sen University and National Dong Hua University. The EU provided financial support for the establishment of the EU Center in Taiwan.

EU Centers have been set up around the globe in order to promote EU studies and academic and social exchanges and cooperation with the EU. Moreover, the EU Centers have gone on to form global and regional networks among themselves.

NTU's Po-Hao Wang receives his award for best paper in the "History and Culture" category.



Research Indicates Visual System's Preference for "Black"



Humans tend to read faster, make fewer errors and detect more mistakes when reading black-on-white texts than when reading white-on-black texts. One may argue that the superiority in reading black texts is likely due to practice, since most reading materials consist of negative-contrast texts. However, the advantage in detecting negative contrast (dark) over positive contrast (bright) also appears in several psychophysical studies that measure contrast sensitivity in adult observers.

Moreover, the dark-over-bright bias was found also in young observers. Dannemiller and Stephens showed that dark targets appeared more salient than bright targets for infants, implying that the advantage in perceiving negative contrasts is probably intrinsic rather than shaped by experience. This raises a question: What part of the visual pathway may be responsible for the substantial dark/bright imbalance in visual perception?

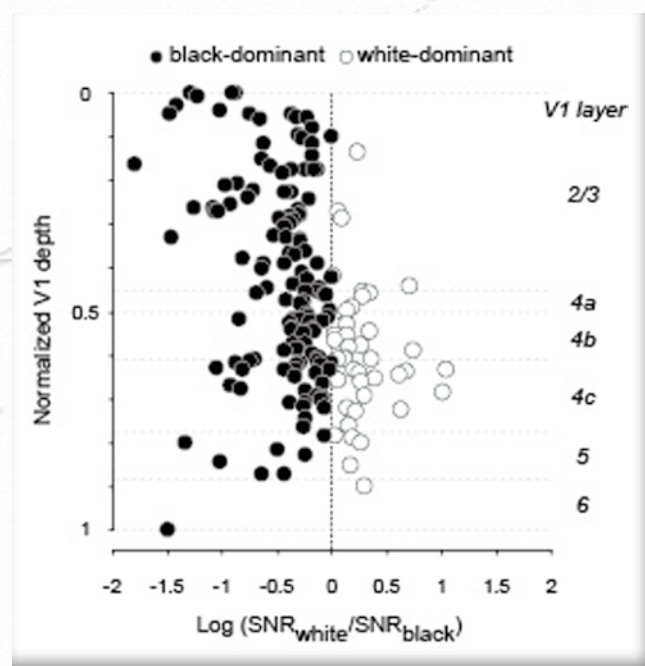
Recently, NTU investigators studied response properties of visual neurons in macaque monkeys and found that the dark/bright imbalance was likely generated within the primary visual cortex (V1, the first cortical stage of visual processing). Information about visual contrast is sent to the brain primarily through two parallel channels in the retina: the "on" channel carries "bright" information and the "off" channel carries "dark" information. The response amplitudes of the on and off channels are approximately equal in the retina and in the visual thalamus.

Even in the input layer 4C of V1, where the on and off channels from the visual thalamus converge for the

first time, neurons have roughly balanced response magnitudes for white and black stimuli (shown against a grey background). However, the majority of neurons in the cortico-cortical output layers 2/3 of V1 (receiving input directly from layer 4C of V1) showed stronger responses to black stimuli than to white stimuli.

These results indicated that the black-over-white preference was largely amplified within V1. The NTU researchers further analyzed the dynamics of white and black responses in layers 4C and 2/3 of V1, and found that the neural circuitry in V1 is wired with a preference to strengthen black responses. This selective wiring could be due to (1) feedforward connectivity from black-dominant neurons in layer 4C to cells in layers 2/3, or (2) recurrent interactions between black-dominant neurons in layers 2/3, or a combination of both.

Overall, the neurophysiological results on the preference for black in macaque V1 are consistent not only with human psychophysics, but also with the findings of EEG and fMRI studies that human V1 responses to decrements are stronger than to increments. The "black" preference in V1 is likely a result of evolution since it has been found in species that are active most of the daytime, including humans and macaque monkeys. It will be interesting to investigate whether animals that are active at twilight or at night show a preference for "white."



Student Volunteers Help Disadvantaged Students in Vietnam

A group of 14 student volunteers spent two weeks during winter vacation helping disadvantaged children in southern Vietnam. The students were traveling as the NTU Vietnam Overseas Service Learning Group, an NTU volunteer project that has entered its seventh year. The volunteers were assisted along the way by the Taiwanese government, private sector organizations and Taiwanese businesspeople in Vietnam. The group also continued its tradition of organizing activities for Taiwanese students in Ho Chi Minh City.

For the duration of their trip, the volunteers were based in Ho Chi Minh City and Lam Dong Province, located in Vietnam's Central Highlands. As with previous visits by the Vietnam Overseas Service Learning Group, the volunteers visited the Taiwanese School in Ho Chi Minh City, where they held a three-day Dream Camp. Because the school's students generally receive relatively little stimulation and competition from the outside world, the camp was designed to foster teamwork and encourage the students to develop ambition, improve their study habits and learn more about Vietnamese culture. It was hoped that after the camp was over the students would go on to develop more active attitudes toward school and outlooks on life.

The volunteer group also went to a school for ethnic minority students in the mountains around Da Lat, the capital of Lam Dong Province. With the help of a few Vietnamese friends, the group developed a sense of closeness with the students by leading them in dancing and playing games outside their thatched huts. The NTU students also taught the children English as well as good personal hygiene habits in hopes that they would apply them in improving their health and the sanitation of their environment.



The group visited schools for the deaf and blind while in Da Lat. At the school for the deaf, the volunteers used simple sign language to interact with the students and lead them in making colorful paper collages and playing games. The children's smiles never disappeared from their faces. Later, the volunteers took students from the blind school on a fieldtrip to an art museum. The students were able to engage in a dialogue with the artworks by touching them.

The group returned to Ho Chi Minh City to lead three days of activities at a kindergarten for children who cannot attend ordinary schools because they lack birth certificates. The activities included instruction in English and personal hygiene.

While in Vietnam, the NTU students paid visits to four Taiwanese companies. These visits allowed them to learn about international business by observing the operations and production processes of these enterprises. The group also held cultural exchanges with the Ho Chi Minh City University of Technology. It hopes to move in the direction of cooperating with a university volunteer group or local non-governmental organization.



The National Taiwan University-Peking University-Yunnan University Student Community Service Group officially kicked off the fourth stage of its volunteer project at NTU on January 22. High-level officials from NTU and PKU were on hand to express support and encouragement to the students. They included NTU's Vice President for Administrative Affairs Yung-Mau Chao, Dean of Student Affairs Bau-Ruei Duh and Associate Dean of Student Affairs Hsi-Mei Lai and Peking University's Office for Hong Kong, Macao and Taiwan Affairs Deputy Chief Chunbao Chen and Communist Youth League



Students at Luo Fu Elementary School in Taoyuan County are immersed in their schoolwork.

Standing Director Tianran Zhang. The project brought together 33 students from Taiwan and China who worked together over eight days to hold a reading camp for

STUDENTS FROM TAIWAN AND CHINA JOIN UP TO PROVIDE COMMUNITY SERVICE



aborigine students and lay a nature trail.

Vice President Chao told the officials and student volunteers that this community service project not only allows students from the three universities in Taiwan and China to get to know one another personally and work hand-in-hand, but also allows them to learn about society and service. He said he looked forward to the volunteers opening the eyes of their students to the world of reading and to the volunteers opening their eyes to the beauty of nature.

The student volunteers traveled to Fusing Township high in the mountains of Taoyuan County to teach a reading camp for students at Luo Fu Elementary School and Hsia Yun Elementary School on January 23 and 24. All of the students attending these remote schools were aborigine children. The Taiwanese and Chinese volunteers used storytelling and hands-on activities to share their own love of reading and learning with the school children. Not only were the students inspired to read, they each learned from the student volunteers that by reading they could continue to become better and better people.

On January 25-26, the volunteers relocated to the countryside of the Jinshan District of New Taipei City. There they teamed up with volunteers from the Thousand-Mile Trail Planning Center to lay a nature trail. Working shoulder-to-shoulder, the volunteers used locally-available materials and an environmentally-friendly approach to build an ecological walking trail. By getting close to nature with their hands, the student volunteers experienced the beauty of nature and life in this part of Taiwan.

On January 27, the volunteers joined with other young people from the Taiwan Soka Association to hold a forum on the topic of community service. This gave the Taiwanese and Chinese youths the opportunity to learn from and encourage each other and to develop their sense of community service.

This coming summer vacation, the community service group will travel to its next destination—Tengchong County in China's Yunnan Province. This will allow another group of students from Taiwan and China to learn and work side-by-side to provide service to local communities.

NTU at a Glance

Mei-Feng Farm at NTU's Highland Experimental Farm is located at an elevation of 2,100 meters in mountainous Nantou County. It lies near Hehuan Mountain and enjoys clean air and water. In 2010, personnel at Mei-Feng Farm adopted an organic farming approach and ceased using chemical herbicides and pesticides in the farm's flower and vegetable section. Despite enduring a 30%-40% reduction in production volume initially, the farmers are determined to carry on with their environmentally-friendly organic farming.



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The farm employs a variety of cultivation techniques, which has resulted in an increasing diversity of plant and animal species on the farm. Now during the autumn harvest, wild boars appear one after the other to raid the crops for a tasty, chemical-free meal. The farm recorded a record high number of wild boars last fall.



Due to the dedicated efforts of the farm's personnel, the Mokichi Okada Association granted the farm transition-period certification for organic farming in December 2012. To obtain organic farming certification, a farm must first pass soil and water quality testing for eight types of heavy

metals and must be operated and managed in line with organic farming regulations, with detailed records kept.



NTU's World Reputation Ranking Rises to 51 to 60

Times Higher Education has ranked NTU among the top 51 to 60 universities in its recently released 2013 World Reputation Rankings. This is the university's best performance in the rankings to date.

This year's ranking reflects the steady rise of the university's global reputation. *THE* ranked NTU among the leading 81 to 90 universities in 2011 and among the best 61 to 70 in 2012.

In 2006, NTU kicked off the first stage its Aim for the Top University Project through which it set out to boost the output of academic papers to match the world's elite universities in 10 to 15 fields. In 2011, with the initiation of the project's second stage, the university endeavored to enhance teaching quality and pursue international research cooperation projects with the goal of rising into the ranks of the world's 50 most elite universities. The Intel-NTU Connected Context Computing Center is one of NTU's new world-class research centers.



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臺北字第4272號

Publisher: Si-chen Lee
Editorial Consultant: Lin-lin Ku
Editor: Pei-Zen Chang
Executive Committee: NTU Secretariat
Published by National Taiwan University
Tel: 886-2-3366-3737
Address: No.1, Sec.4, Roosevelt Road, Taipei, 10617 Taiwan
Website: <http://homepage.ntu.edu.tw/~secretor/ntunewsletter>
臺灣郵政臺北雜字第1146號執照登記為雜誌交寄