NEWSLETTER

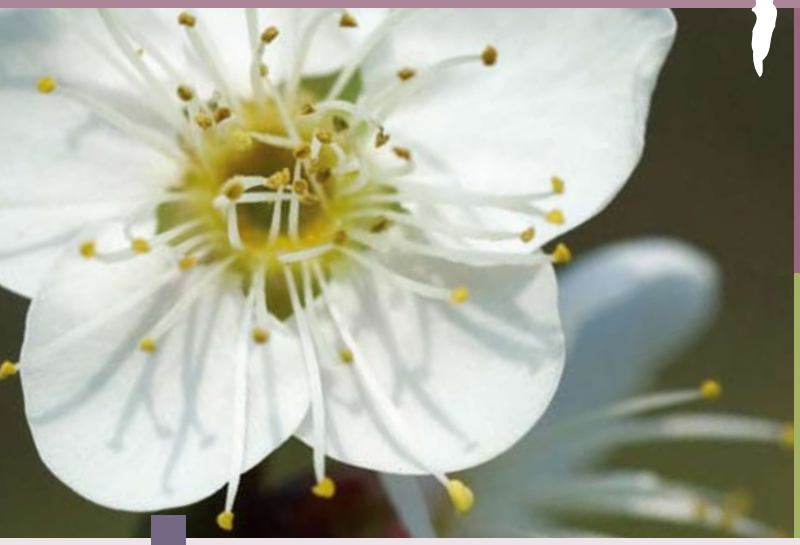
July 2013 | No. 3

Vol. 7

清華

National | Tsing Hua | University

NATIONAL TSING HUA UNIVERSITY



CONTENTS

NTHU CONTINUES IMPROVING IN QS RANKING

Quacquarelli Symonds recently announced its ranking of various fields of study among top universities worldwide. In this most recent ranking, NTHU has 11 fields of study ranked in the top 200. Among the 11 fields, chemical engineering and mechanical engineering have moved up to the spot of 49th. In addition, electronic and electrical engineering, statistics, operational research, materials science and linguistic are ranked between the 51th and 100th, while physics, astronomy, mathematics, computer science, information systems and chemistry are ranked between 101st to 150th. President Lih J. Chen proudly stated that NTHU is in the process of writing a new page of the developmental history of the university. NTHU faculty and students have performed outstandingly over the last few years. They have published their researches among the first rate international academic journals. Four of the seven research papers authored by Taiwanese scholars and appeared in *Science* and *Nature* last year are the works of NTHU faculty and graduate students. Moreover, since the beginning of 2013, NTHU has four more additional research papers published or accepted by *Science*. This means that NTHU has published 8 research papers in the world's most prestigious academic journals within a short period of 18 months. NTHU's academic excellence is also clearly demonstrated by the lion's share of academic awards won by her faculty members over the same period of time. Take the prestigious Outstanding Research Award administered by the National Science Council as an example; ten of our colleagues had won this Award recently, which means that 1.59% of NTHU faculty has won such prestigious award, the highest award winning faculty ratio among all universities in Taiwan.
President Chen believes that such remarkable record comes from the collective efforts of all faculty members and students. "We have improved our curricula, research capability as well as the administrative services. We will continue doing our very best to make NTHU a comprehensive institution of higher learning where students will not only be well trained as professionals but also as roundly educated persons," said President Chen.

GO MASTERS GATHERED IN YI YUAN

The LNT game will be a historical monument for the Go community.

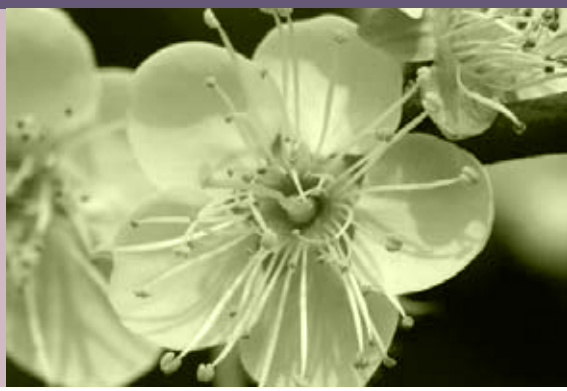
NTHU Go Garden, Yi Yuan, is officially opened on June 1st. It is located in the southern area of the campus, near the ecological park. Yi Yuan not only displays public art pieces of Go & Art, but also a plaque with the inscription of Yi Yuan written by Dr. Yong Jin, a famous writer and an NTHU Honorary Doctorate. Additionally, the garden also displays the monuments of Go Masters' biography, calligraphy and records of their most significant matches. These monuments were all authored by the masters, they are: Qingyuan Wu, Minoru Kitani, Rin Kaiho, Zu De Chen, Hunhyun Cho and Weiping Nie. The pathway to Yi Yuan was also decorated with the stone engraving of ten tactics that teaches knacks for winning matches.

The construction of Yi Yuan was the will of former president, Dr. Chun-Shan Shen, who put a great effort in soliciting donations and sponsorships. President Lih J. Chen stated that President Shen joined NTHU as the Dean of the College of Science in 1973, and taught in the Department of Physics, and then was elected as the President of NTHU. In 2006, out of his devotion to Tsing Hua, Dr. Shen personally wrote in his will to donate his asset for the construction of Yi Yuan with the "earthy construction", i.e. using the least amount of cement possible and without damaging a single tree within the environment.

President Chen expressed that there are over 180 words in Chinese language that pronounce "yi" and some of them have similar meaning, which bears the meaning of grand, fine and playing Go. He furthered stated that Yi Yuan will become Taiwan's, perhaps the world's, most unique Go Garden and resort. President Chen invited everyone to visit the garden and encouraged everyone to make Yi Yuan a place for the enjoyment of learning, playing and appreciating the art of Go while achieving spiritual fulfillment and relaxation.

On the day of the opening, distinguished guests attended include Go Masters Rin Kaiho, Hunhyun Cho, Weiping Nie and Master Qingyuan Wu's eldest daughter, Ms. Jia-Cheng Wu. At the end of the ceremony, Master Rin Kaiho, Hunhyun Cho and Weiping Nie played a memorial three way match of Go in the Yi Ting (Go Pavilion), which was the first time in the history of Go. President Chen took the first letter of each master's name in pinyin and named the match as "The Match LNT" to commemorate this special event. The Go manual played will be engraved on a stone tablet for the purpose of permanent memorial.

Mr. Chou Chun-hsun, the Red Face Go King, was invited to give commentary on the match. He pointed out that this three way match is extremely interesting, because conventional Go match tactics are developed singularly by a player in a match. However, this three way Match LNT requires the three masters to alternate between black



and white chesses each turn, which results in a unique situation that relies heavily on improvisation. Master Rin Kaiho praised the President Shen as a very talented player and contributed greatly to the community of Go. He expressed that Yi Yuan has excellent ambience and he wishes every visitor will appreciate its beauty and hope Yi Yuan becomes a renowned historical site.

Master Weiping Nien, the long term acquaintance of President Chun Shan Shen, expressed that they both love Go and the game of bridge, and they shared a friendship that goes beyond age barrier. He furthered indicated that NTHU and Beijing Tsing Hua are both first rate universities and have nurtured countless outstanding students, and he gave his blessing on the prosperity of both intuitions.

Master Hunhyun Cho mentioned that many Go masters were invited to attend the opening ceremony of Yi Yuan, he felt honored to be able to participate. Master Cho expressed that he is very pleased that NTHU has opened a Go garden on the campus, and he hopes that the Go community can use this resource to bring an even greater development of Go.

ⓐ Distinguish quests attending the opening ceremony of Yi Yuan.

ⓑ Master Hunhyun Cho, Master Rin Kaiho, and Master Weiping Nien playing a three way memorial match.

ⓒ Master Rin Kaih (center) with President Chen and Senior Vice President Ming-Chuen Yip in front of his own bibliography display.

ⓓ (from left to right) Master Hunhyun Cho, Master Rin Kaiho, President Lih J. Chen, and Master Weiping Nien at Yi Yuan.

ⓔ Successful closing of Learning From the Masters.

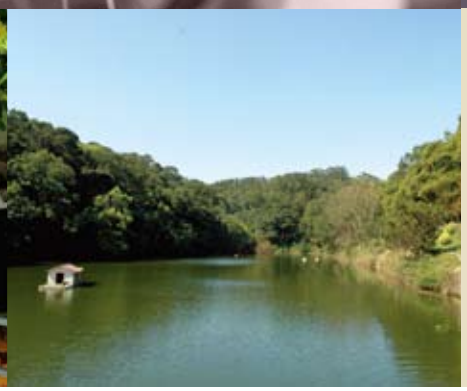
THE GRAND OPENING OF MACRONIX LEARNING RESOURCE CENTER

After 12 years of planning, construction and furnishing, the state of art Macronix Learning Resource Center was officially opened on the 11th of last April. Dr. Wu Minn, Chairman of Macronix International Co., Ltd., and the Chairman of Champion Consulting Group, Mr. Ding-Hua Hu, together with former presidents of NTHU, Dr. Chung-Laung Liu and Dr. Wen-Tsuen Chen, were honored on this special and joyful occasion for their generous donation and concerted efforts that made this beautiful multi-functional facility a reality.

President Lih J. Chen stated at the grand opening that the Center is truly a multi-functional facility which includes the University Library, International Conference Hall, distant learning classrooms as well as the offices of university administration. President Chen also reported that the first event held at the International Conference Hall was the gala in the evening of the 10th to celebrate the 80th birthday of Prof. Chou-Yu Cheng. All participants who attended the gala were impressed with the state of art facility and are very grateful to Macronix International and Chairman Wu for providing NTHU with such an excellent learning environment. Quoting Marcus Tullius Cicero, President Chen said "if you have a garden and a library, you have everything you need." "Well," President Chen continued, "NTHU is well-known for her beautiful, garden-like campus and now we have a grand library where we can have access to all kinds of resource and information in a user-friendly environment. We hope that all of us will make the best use of this wonderful facility and learn as much as we can."

a President Chen awarding VIP certificate to Mr. Wu Miin.

b VIP guests firmly believe that the learning resource center will benefit the city of Hsinchu as a community.



Dr. Wu Miin, Chairman of Macronix International stated that Macronix International places a strong emphasis on the promotion of knowledge acquisition and sharing. Through the establishment of Macronix Learning Resource Center, Dr. Wu hopes to provide all members of NTHU family a cozy learning environment and make the University a breeding ground as well as diffusion center of new knowledge and wisdom.

To celebrate the grand opening, Dr. Wu personally contributed a piece of his calligraphy to be exhibited with other art pieces authored by the members of NTHU and Macronix International. The calligraphy that Dr. Wu wrote was a Chinese character "shu" (恕) which he believes is the essence of the second sentence of NTHU's motto --- (厚德載物) accommodating and supportive.

ⓐ Chairman Wu and President Chen in front of Chairman's calligraphy in the exhibition.

ⓑ Guests at the opening ceremony of Macronix Learning Resource Center.

ⓒ President Chen indicating that Macronix Learning Resource Center took 12 years to complete simply because we demanded perfection.

ⓓ (from left to right) former president of NTHU, Dr. Chung-Laung Liu, Chairman of Macronix Corp, Dr. Wu Miin, President Lih J. Chen, Chairman of Champion Consulting, Mr. Ding-Hua Hu, and former president of NTHU, Dr. Wen-Tsuen Chen blessing the center at the ceremony.

DR. PO-YU CHEN PUBLISHED A REVIEW ARTICLE IN *SCIENCE*

a Prof. Jenq-Gong Duh (left) and Prof. Po-Yu Chen (right) at the press conference.

b (left to right) Prof. Jenq-Gong Duh, Vice Chairman of NSC, Dr. Hocheng Hong, Prof. Po-Yu Chen, President Lih J. Chen and Dr. Shangjr Felix Gwo.

Prof. Po-Yu Chen of the Department of Materials Science and Engineering was recently invited by *Science* to write and publish a review article on the research and findings of "critical mechanics-materials connection" based on structural bio-inspired materials such as spider silk and mollusk shells. On the 10th of last April, Prof. Chen and Dr. Jenq-Gong Duh, Chair of the Department of Materials Science, held a press conference at National Science Council (NSC) under the title of "*Nature as a Teacher: Present and Future Prospects of the Field of Materials and Bio-inspired Materials*" to review the developments and future prospects of this exciting field.

Dr. Jenq-Gong Duh who is the Division Head of Materials Science Section of NSC pointed out, at the press conference, that materials scientists used to pursue a research strategy focusing on modifying non-organic materials to make them more durable and stronger. The "bio-inspired" approach, on the other hand, starts from analyzing and understanding the structural principles of organic materials and tries to mix non-organic materials with organic materials according to such structural principles to create new materials. Such "bio-inspired" approach, according to Prof. Duh has a great potential and will have broad technological applications.

Prof. Chen stated that while we have a long history of using bio-materials in manufacturing process, the bio-inspired materials science is still a budding field. His current research focuses on the "surface" and "mechanical" properties of various bio-materials such as spider silk, sponge skeleton, mollusk shell, porcupine quills as well as bird feathers. He further explained that through a research on the property of shark skin, the research team has discovered that the trenching of skin surface has an anti-adhesion function and can also inhibit the growth of germ colony. Mimicking and applying such skin design to the surface of doorknobs and other surfaces in hospital and other public spaces could greatly reduce the possibility of germ contamination and transmission. Likewise, one of the key components of mollusk's nacreous layer is calcium carbonate, a substance that is as brittle as a piece of chalk. But, due to the fact that it holds a rare stacking structure of chitin and protein similar to the stacking structure of brick and cement, it is both tough and resilient. Thus, if we can repeat such stacking structure correctly and develop new materials according to this inspiration, the materials we make will surely have greater and better applications in our daily life.

Prof. Chen reflected that in the development history of human civilization, materials science has played an important part and has always been one of the key building blocks of civilization. To ensure further development of civilization, materials scientists must pursue their

a Prof. Chen using spider silk, sponge skeleton, mollusk shell, and bird feathers to establish the current research climate and future progress of the materials science.

c Prof. Chen answering questions from the media.

craft along the path that strives to preserve the harmony of humans, civilization, environment and planet Earth. They should also re-educate themselves about the nature and develop more bio-inspired materials. President Chen indicated that there never has a Taiwanese scholar been invited by *Science* to co-author a review article in the past and Prof. Chen is certainly the very first Taiwanese scholar who has such a high honor. Prof. Duh added that Prof. Chen and his dissertation advisor have published two co-authored review articles in the top journal of materials science, *Progress in Materials Science* in 2008 and 2012. These two articles have become standard textbook materials in all major universities worldwide and will soon be edited as textbook and published in the near future.

a b c

EXPLORING THE FUTURE: TEDxNTHU

a TEDxNTHU "Who is at the Door of Invention?"
b President Lih J. Chen, faculty, students and participants at TEDxNTHU.
c Presidents Chen presenting a plaque to the TEDxNTHU team.

TED stands for Technology, Entertainment and Design. " It is a global set of conferences owned by the private non-profit Sapling Foundation, under the slogan of ideas worth spreading," according to Wikipedia, the free encyclopedia.

A group of NTHU students who are curious of new things and frequently inspired by new inventions decided that they will organized themselves and establish a "chapter" of the TED. They spent more than half a year to get themselves organized and with the support of the University, the TEDxNTHU was inaugurated on the 18th of last May under the title of "Who is at the Door of Invention?"

Mr. Juin Chu, a student of engineering indicated that this year's conference highlighted their concerns for the future and society. TEDxNTHU used animation to remind participants that if we mindlessly accept the current situation and never reflect on our current conditions, we will essentially stop thinking as well as creating, and deprive ourselves from accomplishments.

"Who should be in control of one's future? What are some of the problems that our society is currently facing?" TEDxNTHU tries to answer these questions by inviting 8 professionals from Academia Sinica, NTHU and Industrial Technology Research Institute to speak at their first conference from different perspectives.

The first speaker was Prof. Daw-Wei Wang of the Department of Physics. Prof. Wang opened the floor by analyzing the issues of low birth-rate, unequal distribution of wealth and the shortage of food and energy that human society is currently facing. After analyzing the roots of these problems, Prof. Wang encourage his audience to act by solving problems that are around them and following up with a loving care of our community and doing it with a strong believe that we can give back to the society that supported us.

Mr. Chin-Hua Chou, Editor-in-Chief of YoWu Report, shared with the audience on how to use our time efficiently on beautiful things, and avoid being lost in an era of information explosion.

Prof. Yi-Shin Chen, Department of Computer Science, NTHU, vividly explained on how to obtain the answers you want by inserting environment, knowledge and experience into the bracket and add them on the right side of the equilibrium.

General Director of Industrial Technology Research Institute Creativity Laboratory, Dr. Wen-Jean Hsueh, explained on the benefits of interdisciplinary cooperation. She stated that combining ancient wisdom and new technology, and interfacing them with innovation and communication, we can discover multiple possibilities for the future.

Last but not the least, were presentations from two young entrepreneurs, the founder of Accuvally Inc, Mr. John Sie, and the founder of iCook, Mr. Richard Lee. They stated that there is no certain requirement of age for entrepreneurship, but passion, persistent and responsibility. The participants were highly encouraged and looked forward to their own future after hearing from Mr. Sie and Mr. Lee.

a Mr. Yi-Fa Lee.
b Dr. N. S. Tsai.
c Dr. Wei Shyy.

THREE DISTINGUISHED ALUMNI HONORED DURING THE ANNIVERSARY CELEBRATION

At the celebration of the 102nd anniversary of the founding of Tsing Hua and the 57th anniversary of NTHU, the university honored three of her alumni for their outstanding accomplishments and exceptional contribution.

Professor Wei Shyy graduated from the Department of Mechanical Engineering in 1977 and is currently a Chair Professor of Mechanical Engineering and Provost of the Hong Kong University of Science and Technology (HKUST). An international renowned scientist, Prof. Shyy is widely recognized as the authority in the fields of computational fluid dynamics, combustion and propulsion, fluid-structure interaction, biological fluid dynamics. Prof. Shyy has authored and published over 450 research papers in international academic journals and professional conferences. He is also on the editorial broad of the Cambridge Aerospace Book Series and Co-Chief Editor of the Encyclopedia of Aerospace Engineering, a major reference book published by Wiley-Blackwell.

Prof. Wei Shyy has always been an enthusiastic supporter of NTHU. Over the years, he has contributed a great deal of his expertise to help projects launched by the Department of Engineering and frequently cooperated with faculty and researcher at NTHU.

Dr. N. S. Tsai graduated from the Department of Physics in 1977 and is currently serving as the Vice President of Quality & Reliability at Taiwan Semiconductor Manufacturing Company. He first joined the TSMC as a manager in the division of research and development and had successfully established a factory management and quality control system for TSMC when he was the Director of Factory 1 and 4. In 2000, Dr. Tsai led the TSMC to convert its production line from 8 inches wafer to that of 12 inches, allowing TSMC to become the first manufacturer successfully made the transformation in Taiwan.

Dr. Tsai has kept a close relationship with his alma mater. He served as an adjunct professor at the Department of Electronic Engineering between 1989 and 1993 and had personally trained many graduate students who later become successful professionals in the Hsinchu Science Park. Before earning the NTHU Distinguished Alumni Award this year, he was awarded with the Distinguished Alumni Award by the College of Science and is currently serving as the President of NTHU Physics Alumni Association.

An Exceptional Contribution Award was presented to Mr. Yi-Fa Lee who graduated from the College of Nuclear Science in 1964 and served as an instructor at the College during 1965-70. He established Chant Oils Co. Ltd., in 1970 and has been very successful in the trading and manufacturing of oleo chemicals. Mr. Lee, however, has never forgotten the education he has received at NTHU and started to "pay back" to his alma mater in 1984 by making a substantial contribution to the Mei Yi-chi Memorial Scholarship. In 1994, he also made a major contribution to Beijing Tsing Hua to help with the establishment of Mei Yi-chi Memorial Academic Paper Award.

In 2002, he contributed generously toward the construction of Physics Building II. Furthermore, Mr. Lee has contributed to the Tsing Hua Lab project and is currently a member of NTHU's Club One Hundred as well as a member of the Board of Directors of the NTHU Alumni Association. To recognize his devotion and his continuing support for his alma mater, the Alumni Association has established an Exceptional Contribution Award this year and presented it to one of the most deserving devotees of NTHU---Mr. Yi-Fa Lee.

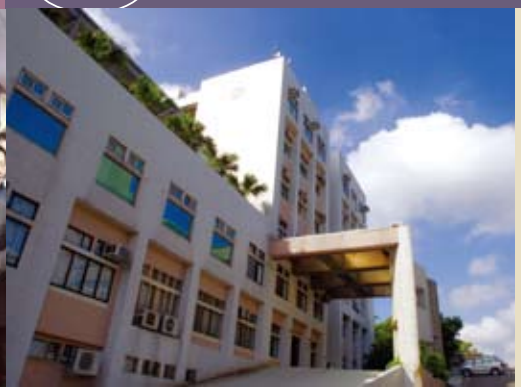
NTHU JOINS YOUTUBE EDU

Prof. Chi-chao Chao (right), the Director of NTHU's Center for Teaching and Learning Development, and the YouTube EDU team.

The broad application of internet has made digital learning both convenient and commonplace. YouTube, the world's most popular video-sharing website has launched YouTube EDU to centralize course materials from more than one hundred world-class universities and making them available to learners around the globe. NTHU has recently joined YouTube EDU to provide course videos for distant learning and plans to get 80% of all courses offered by various departments and graduate institutes available on YouTube in the next three years.

Currently, NTHU is primarily offering courses on YouTube in the fields of engineering, natural sciences as well as social sciences. These are courses taught by celebrated professors and the materials made available include not only the contents of lectures but also supplemental materials as well as past examination questions.

YouTube executives indicated that they will continue to collaborate with the world's top institutions of high education and hope to make YouTube the largest educational platform accessible to the largest group of distant learners. NTHU together with National Taiwan University and National Chiao Tung University have taken the first step to bring East Asian universities to a global platform through which learners from Taiwan and different parts of the world will have an easy access to the best curricula offered in these world-class universities.



NSC STEP CONSORTIUM AND NTHU-TSMC CENTER FOR MANUFACTURING EXCELLENCE

To face the challenges such as globalization, economic down turn, the short life span of IC products and the heightened threshold of technology as well as the cost and capital expenditure of research and development, NTHU is selected by National Science Council (NSC) to coordinate the NSC Semiconductor Technologies Empowerment Partners Consortium (NSC STEP Consortium) to integrate, particularly, the university-industry cooperation programs with manufacturers such as Taiwan Semiconductor Manufacturing Company (TSMC), Global Unichip Corp. (GUC) and VisEra Technologies Company to further improve empirical researches. Meanwhile, the NTHU-TSMC Center for Manufacturing Excellence was also established to promote a greater cooperation between university and industry.

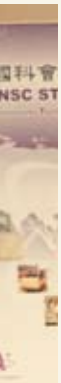
On April 22nd, many distinguished guests attended the opening ceremony held at Engineering Building I to celebrate the inauguration of the Consortium and the Center. These include : President Lih J. Chen, EVP and Co-Chief Operating Officer, Dr. Shang-yi Chiang, VP of Research and Development, Dr. Jack Sun of TSMC; and President of Global Unichip, Mr. Jim Lai, President of VisEra Technologies, Mr. S.C. Hsin, Deputy Director General of the Division of Engineering and Applied Science, NSC, Dr. Sheau-pyng Ju, SVP of Academic Affairs, Prof. Chien-Hong Cheng, Counselor Ue-Pyng Wen, VP of Research and Development, Prof. Shangir Felix Gwo and the Dean of the College of Engineering, Prof. Mao-Jiun Wang of NTHU.

The opening ceremony included two keynote speeches both focused on the restructuring and enhancement of the supply chain of Taiwanese

industries. Prof. Willy Shih of Harvard Business School focused on the topic of "the Return of Vertical Integration, or, a Question of Scale?" while Dr. Jack Sun of TMSC centered his talk on the "Trends and Opportunities of Semiconductor Technology." In addition, Prof. Chen-Fu Chien who presided over the ceremony also reported on the goals and research plans of the Consortium and the Center.

In his report, Prof. Chien indicated that the university-industry cooperative program is aiming to integrate the technology and knowledge accumulated on the campus to the upper and lower streams of the industrial sectors, so that it would effectively become a "virtual vertical integration" of the semiconductor supply chain and enhance its competiveness against vertically integrated foreign competitors. During the research phase, NSC STEP Consortium will play the roles of think tank, catalyst, as well as the reserve bank of human resource on important cross corporation semiconductor-related issues such as manufacturing strategy and capacity planning, yield enhancement and consulting, overall wafer efficiency and productivity, resource and inventory management as well as quality control. In order to solve different problems, Prof. Chien continued, that breakthroughs accumulated from resolving key problems will be magnified into an integrated supply chain decision making mechanism or smart-decision-making-system to solve large and complex problems. Under such implementing-what-you-learned research environment, talents will be trained according to the needs of industry while enhancing the synergy for direct virtual vertical integration of their knowledge.

In addition to cooperating with the industry in the roles described above, NTHU faculty members have also published several Harvard Management Case Studies such as TSMC Way to share the success stories of Taiwan semiconductor manufacturing with international readers.



ⓐ NTHU - TSMC Center for Manufacturing Excellence is officially launched!

ⓑ President Lih J. Chen, TSMC's Co-Chief Operating Officer, Dr. Shang-yi Chiang, research team leader Prof. Chen-Fu Chien and other VIPs unveiling.

ⓒ Prof. Willy Shih of Harvard Business School presenting his keynote speech.

ⓓ Dr. Jack Sun, TSMC's Vice President of Research and Development, presenting his keynote speech

ⓔ Dr. Chin-Tay Shih (left), former Dean of the College of Technology Management, with his calligraphy.

ⓕ Distinguished guests at the opening ceremony of NSC Semiconductor Technologies Empowerment Partners Consortium.

a


b


c

NTHU CELEBRATED POET CHOU-YU CHENG'S 80TH BIRTHDAY WITH MUSIC AND POETRY

a Prof. Cheng signing the poetry book made by the students.

b Teachers and students from National Hsinchu High School were very happy to welcome Prof. Cheng.

c Prof. Chou-Yu Cheng and President Lih J. Chen cutting the birthday cake.

d The performance by National Experimental High School students.

In the evening of April 10th, NTHU celebrated poet Chou-Yu Cheng's 80th birthday with a spectacular gala. In addition to a special exhibition of Prof. Cheng's poems and publications in the lobby of the Macronix Learning Resource Center, NTHU Orchestra, students of National Experimental High School and National Hsinchu High School were all invited to perform Prof. Cheng's work through music and recitations.

As the host of this special event, President Lih J. Chen indicated that Prof. Cheng and he himself are both alumni of National Hsinchu High School. Although they graduated in different classes, they both had benefited from the excellent and rounded curricula that their alma mater offered during their school years. President Chen also noted that Prof. Cheng was the proud winner of the Chou Ta-Kuan Award of Life Literature and the awarding ceremony was also held on NTHU campus. Having the celebration of Prof. Cheng's birthday on the campus has a special significance. President Chen continued, many famous contemporary poets, such as Dr. Hu Shih, Mr. Wen Yiduo, Mr. Zhu Ziqing, Mr. Liang Shiqu and Ms. Huiyin Lin were all members of Tsing Hua family and their works are all considered as classics of modern Chinese poetry. While Tsing Hua is very proud of her stellar literati, President Chen is especially pleased to see so many young people attending and enthusiastically participating in this celebration, indicating that the art of poetry and the spirit of poems are timeless.

The students of National Hsinchu High School studied Prof. Cheng's poems diligently and demonstrated their understanding and appreciation through recitation, drama and songs. The Moving Sound, a group of musicians organized and led by NTHU alumnus gave a musical rendition of three poems composed by Prof. Cheng. All these performances allowed the audience to experience modern Chinese poetry through different media and enhanced their appreciation of Prof. Cheng's creativity.

Prof. Cheng was delighted and touched by the performance of the youngsters and their love for literature and poetry. He indicated that NTHU is not just a university of science and technology; it is actually a comprehensive institute of higher education where students are roundly educated and have a great deal of opportunity to pursue arts and experience the beauty of life.


d

THE FIRST TAIWANESE CHEMIST FEATURED IN THE *AUTHOR PROFILE*

Senior Vice President Chien-Hong Cheng, the first Taiwanese chemist featured in *Author Profile, Angewandte Chemie-International Edition.*

Angewandte Chemie, one of the most prestigious journals in chemistry, started in 2009 to invite authors who had published ten research papers in the journal in the last ten years to publish an *author profile* featuring these accomplished scientists' personal attributes. Dr. Chien-Hong Cheng, Senior Vice President of Academic Affairs and Professor of Chemistry was recently profiled in *Angewandte Chemie*, the first Taiwanese chemist to have such an honor.

Prof. Cheng returned to Taiwan and started his teaching and research career at NTHU in 1979. His research is focused on two areas. 1. The design and development of new metal complex catalyst which can be applied to organic synthesis and effectively produce versatile natural skeleton molecules. 2. Organic electroluminescent material design and components production. Through his research effort, he has produced several high efficient and high value materials that have great industrial applications. Prof. Cheng's researches have attracted much recognition internationally. In the study of metal-catalysed reactions, his findings on the exchange reaction of aryl groups in palladium metal complexes with arly group in phosphorus ligands was published as a special report by the *Chemtracts*, a prestigious American journal of chemistry.

In recent years, Prof. Cheng has developed a series of rhodium and palladium catalysed –hydrogen bond activation reactions, significantly increased the economic efficiency of atom while minimized the steps in natural molecular synthesis. In the area of materials component research, Prof. Cheng's representative work is the production of iridium compounds and the capability of red light emission, which he had received enthusiastic discussions by his colleagues world-wide and nicknamed by Japanese chemists as "the light of Taiwan." In addition to his research on red-emission, Prof. Cheng's research on blue light emission was also featured in the Natural Publishing Group which credited Prof. Cheng's work as an outstanding contribution in the research of OLED.

In addition to his excellent research records, Prof. Cheng has also devoted a great deal of his time and energy toward administrative task aiming at promoting the field of chemistry. Over the years he has served as the Director of Natural Science Division, National Science Council (NSC), Vice President of Research and Development, NTHU and the Chairman of Chinese Chemistry Society. He is also the proud recipient of many prestigious awards and recognitions. He received the Outstanding Research Award from NSC twice (1988-90; 1991-95), National Academic Award from the Ministry of Education, National Chair Professorship of the Ministry of Education (2004,2009) and a Fellowship of the Royal Society of Chemistry. In 2010, Prof. Cheng was honored with the Ho Jin-Dwei Distinguished Academic Award.

a

b

INNOVATIVE AND CREATIVE IDEAS TO IMPROVE THE QUALITY OF UNIVERSITY SERVICE

a The poster of NTHU Innovation and Creativity Campaign.

b Senior Vice President of Operations, Prof. Ming-Chuan Yip, and Vice President and Chief of Staff, Prof. Chen-Fu Chien, awarding the students and staff members for their innovative ideas.

Through the promotion of a Total Quality Management (TQM) Project, NTHU has effectively improved the quality of its administrative services and management efficiency. Recently, the University Administration has launch yet another measure to encourage students, staffs and faculty members to share their creative ideas on how to further improve and upgrade the quality of university administrative processes and service. The campaign was launched last March to encourage all university members to submit their ideas on how to improve the quality of university operation.

Vice President and Chief of Staff, Prof. Chen-Fu Chien, indicated that NTHU's Innovation and Creativity Campaign is a brand new concept. The core value of this campaign is to cultivate a proactive approach toward problem-solving among all members of the university family and to search for ideas that will bring the maximum results with a minimum cost. Prof. Chien also indicated that there have been more than twenty great ideas, ranging from sign placement to patented souvenir designs submitted and accepted since the start of this campaign at the end of last March. The staffs of the Division of Correspondence and Document, for example, had collectively suggested the idea that University Anthem, University Motto, campus sites and the historical events of NTHU have special value to all members of Tsing Hua, and they should be patented and used as themes in designing university souvenirs. Their suggestion was gladly accepted by the Office of the Secretariat and the Office is currently in the process of developing souvenirs that will highlight and strengthen the collective memory of NTHU.

Prof. Chien-Wei Wu, the executive secretary of TQM, believes that every innovative and creative proposal derives from daily experience, activity and observation and he hopes that all NTHU members will actively participate in this campaign to make our university a more efficient organization and our campus a better place to learn and to work.

NATIONAL TSING HUA UNIVERSITY NEWSLETTER

101, Section 2, Kuang-Fu Road, Hsinchu, Taiwan 30013, R.O.C.
TEL：03-5715131 · E-mail：web@cc.nthu.edu.tw · http://www.nthu.edu.tw/

PUBLISHED BY OFFICE OF THE SECRETARIAT

PUBLISHER : President Lih J. Chen
EDITOR : Prof. Chen-Fu Chien
EXECUTIVE EDITOR : Prof. Chung-min Chen

EDITORIAL BOARD : Prof. Chien-Hong Cheng, Prof. Ming-Chuen Yip, Prof. Da-Hsuan Feng, Prof. Sinn-Wen Chen, Prof. Ping-Chiang Lyu, Prof. Min Lee, Prof. Shangjr Gwo, and Prof. Wei-Chung Wang
EDITORIAL TEAM : Yi-Ru Yu and Sabrina Li

1307020 Macis. TEL:04-24733326