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NATIONAL TSING HUA UNIVERSITY NEWSLETTER

President Hocheng Exhorts Class of 2014 to Introspect and Dedicate Themselves to Life-long Learning

Yale President Peter Salovey Receives Honorary Doctorate from NTHU

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NTHU

PRESIDENT HOCHENG EXHORTS CLASS OF 2014 TO INTROSPECT AND DEDICATE THEMSELVES TO LIFE-LONG LEARNING

In this year's commencement, held on June 7,1,699 students received bachelor's degrees, 1,615 received master's degrees, and 342 received doctorates. Been-Huang Chiang, Minister without portfolio of the Executive Yuan, gave the commencement address to the university students, and Fines Lee, Chief Editor of The Big Issue magazine Taiwan, addressed the graduate students. In his speech, President Hocheng quoted Mahatma Gandhi: "Live as if you were to die tomorrow. Learn as if you were to live forever."He also exhorted the new graduates to cultivate self-awareness and dedicate themselves to life-long learning.

President Hocheng also pointed out that each era has its own set of challenges and opportunities, and that in fact, "It's the challenges which help us to realize our potential. However, if instead of rising to the occasion and actively striving to overcome the challenges, we give in to the temptation to grumble and complain, then challenges would turn into major obstacles. In other words, if we fail to see challenges as opportunities, then they become fetters. Your task as recent graduates is to work cooperatively with others to establish yourselves in your careers while benefitting society."

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a. President Hocheng addressing the graduates.
b. President Hocheng conferring a degree.

President Hocheng further pointed out that both Mahatma Gandhi and Nelson Mandela relied on inner strength and self-control to overcome enormous challenges. Similarly, upon graduation all sorts of difficulties are bound to crop up, but with continual introspection and diligence they can all eventually be overcome. Quoting Steve Jobs, President Hocheng said that "Stay hungry, stay foolish"is the right attitude to adopt when it comes to increase your professional knowledge and overcome obstacles, but that when it comes to introspection and self-cultivation we need to add on "stay honest."He also praised the personal integrity of NTHU's graduates and stated that he has great confidence in their potential to make significant and lasting contributions to society.

In his address Minister Chiang stated, "The true measure of success is not how high you climb, but rather how you grow while striving to succeed!"Minister Chiang also asserted that upon entering the job market one's attitude and character will be the key factors of success. For this reason it's important to adopt a good attitude and cultivate one's character.

Quoting Confucius, Chiang exhorted the graduates to "Be vigilant and circumspect, as if on the edge of a deep chasm; as if treading on thin ice!"For success in

the job market requires doing away with impetuosity and arrogance, while continually striving to enhance one's professional abilities and make up for one's inadequacies. Chiang also warned the graduates not to covet fame and fortune, for all they have to do is diligently apply themselves to their work and sooner or later their ability will gain due recognition. Finally, Chiang encouraged the graduates to create their own futures, and reminded them that great success comes through the application of wisdom, flexibility, and a broad field of vision.

In his address Fines Lee pointed out that due to the prestige which comes from being graduates of NTHU they are bound to someday hold positions of responsibility in society, which entails making decisions as to how resources are distributed. Lee reminded the graduates that when doing so they need to adhere to the principles of fairness and personal integrity. Lee also encouraged the graduates to explore the world, strive to transcend limiting ideologies, find their own place in the world, and hold true to their highest values.

Yuze Luo, the representative of the graduating graduate students, also made a speech. Luo stated that having a degree from NTHU hasn't made him a mister know-it-all, but that while pursuing his studies he did learn a loopportunitiet about how to get along well with others and get established in the world. Finally, Luo encouraged all the graduates to be proud of their association with NTHU, to adhere to high standards of personal integrity, and to hold fast to their dreams.

The representatives of the graduating undergraduates, Bing-Lun Ho and Furong Chen expressed their gratitude for all they have learned during their four years at NTHU, both academically and in terms of their expanded view of the world. They also pointed out that, despite the inevitable changes which come with time, NTHU's school motto—Self-discipline and social commitment—will always remain as a timeless wisdom. Finally, Ho and Chen encouraged all the graduates to be sure to continue to support NTHU in whatever way they can.

During the ceremony the eight recipients of the Mei Yi Chi Memorial Scholarship—NTHU's highest academic honor, received by no more than one percent of seniors—were also feted: Wu Chenghan of the Department of Electrical Engineering, Cai Yehan of the College of Technology Management, Zhang Xianting of the Department of Mechanical Engineering, Li Yangxiu of the Department of Economics, Xu Zejun of the Department of Computer Science, Cai Yuxuan of the Department of Industrial Engineering and Engineering Management, Yao Rouqing of the Department of Life Science, and Liu Youxuan of the Department of Quantitative Finance.

a. President Hocheng and a group of graduates.
b. Minister Chiang pointing out that the true measure of success is not how high you climb, but rather how you grow while striving to succeed!.

YALE PRESIDENT PETER SALOVEY RECEIVES HONORARY DOCTORATE FROM NTHU

On August 11 a delegation of NTHU representatives visited Yale University to confer an honorary doctorate of humane letters to Dr. Peter Salovey, the president of Yale University. During the ceremony held on the Yale campus at the Maurice R. Greenberg Conference Center, NTHU President Hong Hocheng stated that as a pioneering researcher in the field of emotional intelligence, Salovey has made extensive contributions to society, and personifies the spirit of NTHU school motto: Self-discipline and social commitment.

President Hocheng also mentioned that the connection between Yale and NTHU goes back over 100 years, since Tang Guo'an, the first president of Tsinghua College (the predecessor of NTHU) was a Yale graduate. President Hocheng went on to state that while NTHU is known around the world for its high academic standards, in addition to academic excellence, NTHU also emphasizes the educational process and the molding of the entire person, for which purpose it is important to have Dr. Salovey as a role model.

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a. President Hocheng conferred an Honorary Doctorate to President Peter Salovey.
b. President Hocheng (right) and Chuang, Hwei-Lin, Dean of General Education(left) presented President Salovey a piece of Chinese calligraphy with NTHU motto "Self-discipline and Social Commitment " written.

During his conferral speech Hocheng stated, "Without a doubt, Dr. Salovey is a paragon of intelligence, and for the past century Yale has been one of America's premier institutions of higher education and a world leader in innovation."He also mentioned that together with his colleague John Mayer, Salovey developed a variety of tools for measuring emotional responses and the influence they have on human thought and behavior. Thus his research has had a major impact on the field of health psychology and public health policies.

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Established over 300 years ago, Yale has long been famous worldwide for its academic excellence. In the 21st century, however, the global spotlight is beginning to shine on Asia, and presently a number of East Asian nations are transforming themselves into economic and academic powerhouses. President Hocheng also pointed out that despite its relative youth; NTHU is already regarded as one of the leading research universities in Asia.

Emphasizing that NTHU is endeavoring to build on its strengths, as well as the significance of the event for both universities, President Hocheng also stated, "This is a first for Taiwan. Today marks the beginning of a relationship between Yale and NTHU, a relationship which will surely grow in importance."President Hocheng also expressed his hope that additional institutions of higher learning on both sides of the Pacific Ocean will join together and develop into an "integrated global

CO-FOUNDER OF QUALCOMM DR. IRWIN MARK JACOBS AWARDED NTHU HONORARY DOCTORATE

On August 19 Dr. Irwin Mark Jacobs, co-founder and former chairman of the Qualcomm Corporation, was awarded an honorary doctorate of engineering from NTHU. At the conferral ceremony held in San Diego, California, NTHU President Hong Hocheng stated that in addition to being a renowned engineer and entrepreneur, through his long-term support of education and social causes, Jacobs embodies the spirit of the NTHU school motto: Self-discipline and social commitment.

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President Hocheng went on to state that while NTHU is known around the world for academic excellence, NTHU also emphasizes the education of an entire person, and Dr. Jacobs is an ideal model for all NTHU students. In addition to mentioning that Dr. Jacobs' invention of code division multiple access (CDMA) was a major factor in the rapid development of mobile phone technology, President Hocheng also pointed out that Jacobs is widely admired for his support of humanitarian projects and his efforts to promote social responsibility in business.

Because NTHU was established at a turbulent time in East-West relations, the school has always had a global outlook. President Hocheng also mentioned that it was the technology developed at Qualcomm which enabled mobile phones and devices to have a world-wide range, and that this is the spirit of innovation which NTHU wants to acknowledge and promote.

Today Qualcomm is a leading designer of semiconductors, as well as a major producer of wireless communication devices. President Hocheng also stated that in recognition of his outstanding contributions in the areas of business, education, and philanthropy, in 2013 Jacobs was honored with a Distinguished Chair Professorship at NTHU.

a. Delegation of NTHU took photo with Dr. Irwin Mark Jacobs and his wife Joan after the conferral ceremony of the Honorary Doctorate. From lef to right : Secretary General Min Lee,Academician A.S. Chiang, Senior VP Prof. Y.S. Liu,Senior VP Prof. D. H. Feng, Dr. Irwin Mark Jacobs and his wife Joan, President Hong Hocheng, Prof. C.K. Toh, and VP S.W. Chen

b. President Hocheng (left) and Professor C.K. Toh (Right) presented Dr. Irwin Mark Jacobs (middle) a piece of Chinese calligraphy with NTHU motto " Self-discipline and Social Commitment" written.

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LEAVING NO STONE UNTURNED: TWO NTHU FACULTY MEMBERS ELECTED ACADEMICIANS AT ACADEMIA SINICA

On July 4 Academia Sinica published a list of newly elected Academicians, and two NTHU faculty members were included: Ann-Shyn Chiang of the Institute of Biotechnology, and Cheng-Hwa Tsang of the Institute of Anthropology. Professors Chiang and Tsang were felicitated at a reception held at NTHU on July 11. Among the many notable guests were Academicians Wu Chao, Lih J. Chen and Yi-Long Huang, and Professor Emeritus Shih-Lin Chang.

In his address President Hocheng said that the outstanding research of Professors Chiang and Tsang demonstrates the three pillars of academic excellence at NTHU: significance, scope, and perseverance. As for significance, both Chiang and Tsang have selected research topics which are important and unique. In terms of scope, both have assembled large, interdisciplinary research teams. When it comes to perseverance, both are highly dedicated to their research and have the patience to carry out a project over a long period of time.

In his speech Chiang said that although he is not a graduate of NTHU, he decided to join the newly established Institute of Biotechnology because he admires NTHU's spirit and forward-looking approach to research. At that time most researchers in his field were probing into the secrets of genetic sequences, but Chiang decided to conduct research on the neural pathways of fruit flies. Despite a lot of ups and downs, his research has already yielded significant results. Because he was conducting excavation on Green Island, Prof. Tsang was unable to attend the reception, but was able to address the assembly via telephone. He stated that NTHU is the leading school in Taiwan in the field of anthropology, since professor Yih Yuan Li joined the faculty and established the college of Humanities & Social Science. He also indicated that, as an archeologist he often recalls the words of Hu Shi: "Let your

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a. From left to right: Academicians Yi-Long Huang, Lih J. Chen, Ann-Shyn Chiang, President Hong Hocheng, Academician Wu Chao, and Prof. Emeritus Shih-Lin Chang.

b. Professor Ann-Shyn Chiang is well known around the world for his work in neuroanatomy and behavioral genetics.

Professor Cheng-Hwa Tsang (wearing white), a noted authority on archeology and the prehistoric cultures of Taiwan, with his underwater research team researching a shipwreck in Penghu.

search take you to the ends of the earth."Despite the difficulty of traveling to and working in remote locations, for Tsang the joy of discovery makes it worthwhile.

Prof. Chiang is well known around the world for his contributions to the fields of neuroanatomy and genetics. As a youth he was so moved the first time he viewed living tissue under a microscope that he decided to pursue a career in the biological sciences. After many years of hard work he has received a number of awards for his groundbreaking research on the memory and neural network of fruit flies.

Chiang is the first researcher to completely map out the neural pathways of the fruit fly, for which purpose he invented an anatomic tissue-clearing solution for high-resolution 3D confocal imaging of thick biological samples. Since 2007, in addition to mapping the neural pathways used to transmit olfactory and aural information in the tiny brain of the fruit fly, his research team has also discovered the neural cells the fruit fly uses to store medium- and long-term memory.

A noted authority on archeology, Tsang has made major contributions to our understanding of the prehistoric cultures of Taiwan. Moreover, Tsang organized Taiwan's first underwater archeological team, with which he has already conducted investigations in Penghu, Anping, Green Island, and the Dongsha Atoll, resulting in the identification of around 80 shipwrecks.

When ancient artefacts were discovered during the construction of the Tainan Science Park in 1994, work was halted so that an archeological team led by Prof. Tsang could conduct an investigation. In what turned out to be one of the longest and most significant archeological projects in the history of Taiwan, his team unearthed a large number of artefacts which have shed considerable light on the prehistory of Taiwan, Southeast Asia, and the Pacific Islands.

With his seemingly inexhaustible zeal for discovery and exploration, Prof. Tsang is currently supervising archeological fieldwork on the wreck of a Spanish merchant ship near Green Island, as well as a dig at a Paleolithic site in Taidong's Changbin Township.

NOBEL LAUREATE SAMUEL CHAO CHUNG TING ADDRESSED NTHU STUDENTS

On July 8th Samuel Chao Chung Ting, who was awarded the Nobel Prize in Physics in 1976, visited NTHU and gave a talk focusing on his work developing the alpha magnetic spectrometer (AMS). In his talk Ting emphasized the importance of curiosity, confidence, and hard work: "Human curiosity is the driving force behind basic research."Warning his listeners of the pitfall of overemphasizing technology transfer at the cost of basic research, he pointed out that "basic research is the driving force behind the development of new technology and industries." Over 400 people, including a large number of high school students, packed into the conference hall, with latecomers sitting on the aisles.

In 1976 Ting and Burton Richter were together awarded the Nobel Prize in Physics for the discovery of the J/ψ meson nuclear particle. In 1995 Ting began developing the AMS, a particle physics detector for conducting research on antimatter and searching for evidence supporting the existence of dark matter. In Ting's view, research on dark matter and antimatter is fundamental to contemporary physics.

After 16 years of joint research involving researchers from 16 countries, in 2011 the 7.5-ton AMS was finally launched into outer space and mounted on the International Space Station, where it is being used to advance our knowledge of the universe.

While speaking on the work of the transnational research team, Ting emphasized the need to be highly circumspect when making decisions. He also pointed out that in meetings he encourages everybody to openly share their views and listen closely to what others have to say. Speaking on the philosophy of science, Ting pointed out that "majority rule"is not the spirit of science; rather, scientific advancements come about only if it is possible for the minority to overrule the majority.

Speaking further on his view of science, Ting again emphasized, "Human curiosity is the driving force behind basic research."Ting also stressed that advances in physics are made by continually disproving others' hypotheses, and that experimentation is the final word in science. In the case of his own research on J/ψ meson, his hypothesis was

Ting's talk attracted a standing-room-only audience.

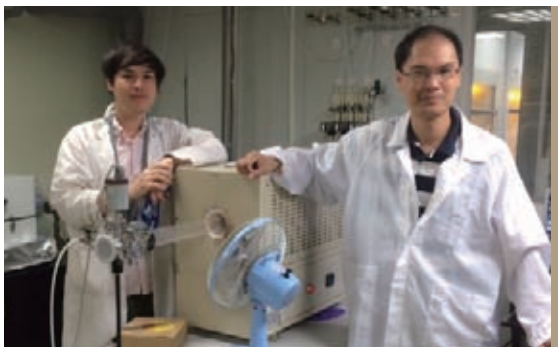
repudiated by the vast majority of physicists. At that time it was widely accepted by physicists that there existed only three types of quarks, and that these three could account for all phenomena observed in physics. However, Ting held fast to his hypothesis, and his experiments eventually proved the existence of three additional types of quarks.
Ting also spoke on the current debate as to the relative importance of basic research versus applied research and technology transfer: "Basic research is the driving force behind the development of new technology and industries."In his view, if we limit ourselves to technology transfer and neglect basic research, then after a while there won't be anything to transfer!

Feng Da Hsuan (left), Senior Vice President of Global Strategy, Planning, and Evaluation, presenting Samuel Ting with a memento of his visit to NTHU.

PREFESSOR PO WEN CHIU'S RESEARCH ON THE GROWTH MECHANISMS OF GRAPHENE PUBLISHED IN *NATURE COMMUNICATIONS*

Prof. Po Wen Chiu of the Department of Electrical Engineering and Institute of Electronic Engineering leads a research team investigating double-layer graphene. Using a scanning transmission electron microscope, they have become the first researchers to observe the process by which carbon atoms form into graphene.
Their report on this innovative breakthrough has been published in the June issue of the prestigious British journal *Nature Communications* (DOI: 10.1038/ncomms5055).
Prof. Chiu often points out that the discovery of graphene led to many advances in the field of nanoscience. Firstly, it enabled researchers to use the single-atom thickness of graphene to verify the peculiar zero-mass fermions exhibited by low-energy electrons. Also, graphene is an excellent conductor of electricity and heat, making it highly suitable for high-speed electrical components, touch panels, and transparent conductive film.

As for practical applications, large-area graphene films need to be prepared through a process of chemical vapor deposition. The key factors in determining the quality of the graphene film are the grain



From left to right, Chao Hui Yeh and Prof. Po Wen Chiu in their lab.

boundaries and derivatives. Chiu says that understanding the growth mechanism of graphene and how to control its growth characteristics is the focus of his research. However, the graphene structure grows relatively quickly (at a rate of about 100–200 atoms per second), and is therefore difficult to observe.

In cooperation with Japan's AIST, Prof. Chiu used bilayer graphene in a single-crystal, small-layer border to form an epipole. When the temperature dropped from 1050° C to 500° C, with the remaining ultra-low hydrocarbon gases as a carbon source, it was possible to control the growth rate of the graphene. Then they used adsorption of single silicon atoms to catalyze the side-edge growth of the graphene. At the same time, they used a scanning transmission electron microscope to simultaneously observe the carbon atoms slowly crystallize one by one, in the process discovering how to use five-ring and seven-ring deficiencies to rotate the direction of the crystalline structure.

As Prof. Chiu puts it, "Inventiveness and persistence are the keys to breakthroughs in science and technology!" The keys to success are teamwork and a detailed division of labor, so that every member of the team works in a highly efficient manner. Recalling the process of the experiment, he says that each member of his team is a highly talented, has a high degree of enthusiasm for science, and is willing to spend lots of time and effort to develop new technology.

Team members Chun-Chieh Lu and Chao-Hui Yeh, widely acknowledged for their skill in growing graphene, were able to use the chemical vapor deposition method to achieve perfect crystal stacking. Yung-Chang Lin, whose graphene transfer technique is unsurpassed, has become a celebrity, and his contribution has been a key factor in the team's success. Finally, Zheng Liu's superb skill in the use of the electron microscope has been honed over a long period of time. In fact, the contributions of each and every member of the team were indispensable, and the entire team is very pleased to see their efforts recognized.

Professor Po Wen Chiu's team members

PROVIDING STUDENTS WITH MORE THAN JUST AN EDUCATION : THE SIXTH ANNUAL OUTSTANDING MENTOR AWARD

On May 26, 2014, in a ceremony held in the International Conference Hall, the Sixth NTHU Outstanding Mentor Award was conferred to Professor Chang Mi-Chang of the Department of Electrical Engineering, Professor Chen Lin-Yi of the Institute of Molecular Medicine and the Department of Medical Science, and Professor Huang Jia-Hong of the Department of Engineering and System Science. During the ceremony NTHU President Hong Hocheng felicitated all three for their excellent teaching and student guidance.

Chang Mi-Chang—A Teacher for All Seasons

Professor Chang says that his goal in life is to pass on all that he has learned to the younger generation. He also hopes that students will gradually mature during their four years at university, gain self-confidence, and find their direction in life. Indeed, Chang delights in the prospect that someday his students may surpass his own achievements.

Chang has over 70 students in his C programming class and teaches them over 140 codes every week. Yet he somehow finds time to run each code and looks them over and makes comments. Chang strives to teach by personal example and often says that the code his students wrote has a certain kind of beauty. Not satisfied with merely running his students' codes and seeing that they work, Chang emphasizes the thinking process that goes into creating them. Thus he endeavors to take the student's point of view as he goes through each line looking for parts that need improvement. Recognizing the remarkable care Prof. Chang puts into checking their codes, his students naturally strive to improve their work.

Although Prof. Chang is the official advisor for only six students, he actually provides guidance to a large number of students and makes it a point to have a personal chat with as many of his students as possible. Ever solicitous of his students' needs, at times Prof. Chang even goes so far as to put his students into contact with his associates in the industrial sector who are willing to share their knowledge and experience. Indeed, Prof. Chang goes all out to help his students, not only with their school work, but also with whatever problems they may be facing in life.

The sixth NTHU Outstanding Mentor Awards were personally conferred by President Hocheng Hong. From left to right are Sun Yuh-Chang, director of the Student Counseling Center; Chang, Hsiang-Kuang, VP of the Office of General Affairs; Chou, Hwai-Pwu, vice-president of operations; President Hong Hocheng ; Professors Chang, Mi-Chang,Chen, Lin-Yi, and Huang, Jia-Hong; VP of the Office of Student Affairs; and Tai Nyan-Hwa, VP of the Office of Academic affairs.

As a way of encouraging students to develop their critical faculties, Prof. Chang generally refrains from providing simple answers. Sometimes he smilingly stands back and observes the student groping about for a solution, and when the time is right he nudges the student in the right direction Knowing what it's like to grapple with a problem, he takes much pleasure in observing the process by which students undergo a kind of metamorphosis. When the student finally breaks out of his cocoon he makes it a point to compliment them and give the student all the credit.

Find your career, find your life!—Chen Lin-Yi

When she was growing up, Associate Professor Chen Lin-Yi never thought that she would become a teacher. She had an interest in the biological sciences and thought she would pursue a career in medicine. Although enthusiastic about teaching, if she had a chance to do it all over again, the outgoing Chen would choose the field of creative design. While design and biology may seem to be poles apart, for Prof. Chen they are closely interrelated: "Actually, there is a close connection between drawing and biology. Prior to the invention of the high resolution microscope it was necessary to use drawings. Even today, when using a simple microscope without photographic capabilities you still need to draw. In my classes I show students drawings made by biologists 100 years ago. Then I show them an image made using a modern microscope so that they can see that there is very little difference."So research in the biological sciences is both an art and a science.

Professor Chang Mi Chang of the Department of Electrical Engineering.

Chen knows the importance of being a good listener. Whenever a student comes to her, she would first listen to everything the student has to say, and only then gives some feedback: "It often happens that by the time they finished telling their story, they already have the answer they are looking for."Once the student has arrived at the answer in this way, all they need is some affirmation and encouragement.

As Prof. Chen sees it, trust is an essential part of the teacher-student relationship, and trust is established by taking an active interest in one's students. "If I notice in class that a student looks out of sorts, I make it a point to ask how he or she is doing."Once they sense that their teacher is genuinely concerned, their apprehension disappears. When it comes to helping her students, Chen maintains an open-door policy, and hopes that her students won't be afraid to come to her with their problems.

Even off campus, Prof. Chen is literally on call round the clock. Whenever they need help dealing with an unexpected problem, Chen is the first person they think of. For Chen, being a teacher at NTHU entails playing the role of a "backup parent,"someone students can lean on while away from home. Despite her role as a second mother outside of class, in the classroom Chen is strict with her students. In the first class she lays down a few simple rules, and makes it clear that she expects all her students to work hard, and that in her lab she is especially meticulous about observing her students' every move. Chen smilingly mentions that even though she is very strict in the classroom, she is also very positive and reaffirming: "As long as you use the right teaching methods,

students will be willing to learn, and will realize their potential, and come to welcome challenges."

If 20 years from now your knowledge and ability are equal to or superior to mine, only then would I consider myself to be a successful teacher— Huang Jia-Hong

When he was a boy Prof. Huang had no idea he would one day become a teacher, for his dream was to become a scientist. Recalling his student days and the teachers who had the greatest influence on him, he states, "There are four teachers who had a highly positive impact on my development. If not for them, I wouldn't be here today."

The first of these was his primary school teacher Chung Kun Hsiung, who was highly solicitousness towards his students, an approach which has been adopted by Huang in his own career as a teacher. Prof. Huang also credits Chung with arousing his interest in reading and learning. The second of these teachers was Chang Shih Chin, his thesis advisor when he was working on his master's degree in materials science and engineering at NTHU. In addition to what he learned in the classroom, Huang credits Chang with encouraging him to go abroad for further studies, a course of action which eventually led him into the teaching profession. The third teacher was Carl Altstetter, Huang's dissertation advisor at the University of Illinois. During his four years in the US, Huang learned from Prof. Altstetter not only about materials science, but also gained much insight into American culture and greatly increased his ability to think independently and critically. After graduation Huang met the last of these four influential teachers, Prof. Haydn H. D. Chen of the University of Macau, which led to a significant turning point in his career. At that time membrane technology was not highly developed, nor was it a popular research topic. However, Prof. Chen encouraged Huang to make a shift from metals to the under-studied specialization of membrane research.

While Prof. Huang has a good relationship with his students, he doesn't want them to see him as a father figure: "In the past, education was carried out using an apprenticeship system. When a boy reached the age of around 13 he was sent to his teacher's house to begin his apprenticeship. That kind of teacher really was like a father. But as part of the contemporary education system, my primary role is to transmit all my knowledge to my students, who one day might become one of my colleagues, or perhaps even my boss.

When students come to him with a problem, rather than giving a quick answer, Prof. Huang relates his own experience in dealing with a similar problem, giving the student an opportunity to think things out for himself and find his own solution. For example, three years ago a student who was flunking out came to Huang to ask for help. Instead of trying to intercede on his behalf, Huang merely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a. Assistant Professor Chen Lin Yi of the Institute of Molecular Medicine and the Department of Medical Science.
b. Professor Huang Jia-Hong of the Department of Engineering and System Science.

suggested that he consider his options for transferring to another department or another school. A year later the student had gained admission to the Department of Medical Science and came to Huang's office to thank him for his advice: "He was grateful that I helped him to see things clearly. If I had just found a way to help, then he would have kept on struggling in the same way."Prof. Huang doesn't fawn on his students; rather, he helps them understand the nature of the problem, thereby increasing their ability to think for themselves.

Some people hold the view that students from a privileged background enjoy an abundance of educational resources, thus have an unfair advantage in comparison to other students. However, Huang sees things differently: "No doubt, coming from a privileged background can be an advantage, but you have to consider where the starting line is actually drawn. A student may come from a wealthy family or have a lot of talent, but if he doesn't have a strong sense of purpose, then he hasn't really left the starting line. For those who have such an advantage early in life, the starting line may be somewhat ahead of other contestants, but that doesn't mean that they will run faster once the race begins. Once somebody has become clear about their professional goals, that's where the starting line is drawn; and that's when the race really begins." During his 25 years of teaching, Prof. Huang's enthusiasm for teaching has continually grown. Asked about what expectations he has for his students, Huang confidently states, "Of course, I hope that someday they will surpass my own accomplishments. When their knowledge and ability surpass mine, I will consider myself to have been a successful teacher."In Huang's view, a successful teaching career is measured not by how many excellent students one has, but rather by how much progress one's students make!

SHIN-HUEI WANG WINS INNOVATION AWARD FOR YOUNG RESEARCHERS

In order to encourage creativity and in-depth research amongst young scholars in Taiwan, the Foundation for the Advancement of Outstanding Scholarship established the *Innovation Award for Young Researchers*, for scholars working in three areas: mathematical sciences; life sciences; and the social sciences and humanities. This year Shin-Huei Wang of the Department of Quantitative Finance won such an award in the humanities and social sciences division.

Professor Wang's main research areas are time series analysis, empirical international finance, asset pricing models, and portfolio management. Wang says that her inspiration for taking up research in these areas comes from her practical experience working in the field of commerce. It was this experience that taught her that real-time financial crisis tracking systems and a corresponding procedure for adjusting asset allocation are of primary concern to investors, portfolio managers, and policy makers at central banks.

Wang's previous work includes designing a real-time tracking and forecasting system for measuring changes in data, her research have been published in prestigious academic *journals* abroad. Her research on the valuation of the Chinese *renminbi* has also been published in international *journals*.

In her acceptance speech Prof. Wang expressed her appreciation for the excellent research environment at NTHU, as well as for the support and encouragement she has received from a number of people: Professors Ching-Fan Chung and Shih-Ti Yu of NTHU's Department of Quantitative Finance; Cheng Hsiao of USC; Rui-Chi Wen of the Hong Kong Baptist University;


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and Luc Bauwens, Christian Hafner Kevin Yang, Laurent Sebastien, and Chrysovalantis Vasilakis, her colleagues at the Center for Operations Research and Econometrics at the Catholic University of Louvain. Wang also thanked four mentors who have given her valuable feedback over the years: Javier Hidalgo of the University of London; Jun Yu of the Singapore Management University; Chen Shengxian of National Taiwan University; and Zhu Jiaxiang of Beijing University.

Wang also expressed her appreciation for the assistance she received from her students while she was teaching in China, in particular the data-processing support she received from Xie Yimeng and Pan Zhiyao. Finally, Wang thanked her husband and family for their patience and understanding while she spent so much time abroad pursuing her dream.


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a. Shin-Huei Wang, recipient of this year's Innovation Award for Young Investigators.
b. Shin-Huei Wang with her husband.

A LONG AND WINDING ROAD LEADING TO NTHU: THE LIFE AND TIMES OF CHANG LING CHIA

A long journey came to a happy ending with a visit to NTHU by the daughter of Chang Ling Chia, the first director of the NTHU Library. Hsu Ming-Teh graduated from NTHU's Department of Nuclear Engineering in 1968 and is the current director of Office of the University Development, recently received an unexpected phone call from Mr. Chang's daughter, Chang Tai Tsui, who made a long trip from Bolivia to get in touch with her roots.

As Hsu recalls, NTHU was reestablished in Hsinchu in 1956 with the Institute of Nuclear Science as its first department, and in 1957 Chang Ling Chia was appointed the first director of the university library, a position he held until 1972. Starting off from scratch, Chang energetically applied himself to the task of setting up the new library. Built in 1968 and commonly referred to as "The Red Building,"NTHU's first library was a three-story brick building located on the site now occupied by the Taida Building. Mr. Chang helped design the library, which received a lot of attention due to its large size and modern facilities.

Chang Ling-Chia, the first director of the NTHU Library.

Chang concurrently served as the director of the Department of Physical Education. In 1964, when NTHU enrolled its first batch of undergraduates, the entire number of students, faculty, and staff amounted to only about 80 people. Everybody lived on campus, and every morning at 7:00 Chang would lead the entire school in a vigorous round of calisthenics, push-ups, and a jog around the track. Chang was also instrumental in expanding NTHU's athletic facilities, and in 1969 he helped to initiate the Meizhu Tournament, an annual sports competition between NTHU and National Chiao Tung University.

Despite his unassuming appearance, Chang had a long and varied career. After graduating from Tsinghua College (the forerunner of NTHU) in Beijing and working as a teaching assistant at the same school, Chang went to the US, where he earned a master's degree in physical education from Springfield College, and then obtained his Ph.D. from the University of Iowa. Afterwards, he moved to Bolivia, where he got married and became a government official.

During his time in Bolivia Mr. Chang held various important government posts, and while representing Bolivia at a meeting in New York he happened to meet President Mei Yi Chi. After learning about all the ups and downs Chang was experiencing in Bolivia, President Mei invited him to come to Taiwan and teach at NTHU. Chang replied, "Since you are the president of the university, that makes me your student, and

Hsu Ming The (third from right) with Chang Tai Tsui (third from left) and family.

a student has to do whatever the president tells him to do."Soon afterwards Chang bid farewell to his wife and daughter, left Bolivia, and came to Taiwan.

While teaching in Taiwan, whenever Chang ran into people he knew from Bolivia, they would always suggest that he's better off staying in Taiwan. When his wife and daughter came to visit, President Mei gave his daughter the name " Chang Tai Tsui"which to this day are the only Chinese characters she knows how to write. Of course his wife tried to persuade him to return to Bolivia, but every time she did so he would reply, "It's true that I could enjoy a very comfortable life in Bolivia, but when I die, nobody would remember me. Here in Taiwan, however, even after my death I will continue to live in the heart of my students."By the end of her visit to NTHU, Chang Tai Tsui earnestly told Hsu, "Now I finally know that my father was right; he lives on not only in the heart of his students, but also in the heart of NTHU."

At the end of their meeting, Hsu presented Chang with a copy of *Appointment with NTHU* and pointed out where her father's name appears therein. During her stay in Taiwan Ms. Chang visited her father's grave, and NTHU went all out in helping her meet up with her father's relatives in Taiwan.

Following Chang's visit to NTHU, Director Hsu was so moved by all the reminiscing about his student days that he has written an article titled "Return to NTHU,"in which he recounts all the contributions Chang Ling Chia has made to the school.

BUDDING VIRTUOSO NIAN-KAI CHUNG WINS NATIONAL CONTEST

Nian-Kai Chung, a junior in the Department of Biomedical Engineering and Environmental Sciences, came in first place in the *zhonghu* solo category of the University B Division in the 2013 National Young Musicians Competition, bringing honor to his school and giving a major boost to his music career. In his acceptance speech Chung stated, "Learning to play the *zhonghu* is like venturing into an endless cavern; every time you think you are nearing the end, you suddenly discover that you still have a long way to go."

For the shy-looking Chung, learning to play the *zhonghu* is best described as developing a relationship with the instrument. He's always had an interest in Chinese classical music, and that's how he fell in love with the *zhonghu*: "It's has only two strings, a small body, and a slender neck, but the sound it makes is magical."In Chung's experience, it's as if the *zhonghu* chose him, rather than the other way around.

Chung began learning *zhonghu* when he was in the fifth grade, and in the sixth grade he joined the Miaoli County Youth Orchestra. During junior high school he joined the Hsinchu City Youth Orchestra, and currently plays with the Hsinchu Youth Orchestra. His main teachers have been Li-Ting Yeh,Wei-HaoWu, Jia-Yu Li, and Bi-Ru Tsai. In his short career he has already shared the stage with a number of highly accomplished musicians, including Min Hui-fen, Tang Feng, and Sun Huang.

Although the *zhonghu* has long been his constant companion, it has not always been smooth sailing. When he was in primary school there weren't many other students learning the *zhonghu*, so his talent soon became apparent, leading him to become a bit arrogant. However, when he started playing with orchestras he soon discovered that there were lots of other talented musicians, and he quickly disabused his illusions. It was also at that time that he first encountered the frustration of practicing hard without attaining the expected results. As a result he learned the supreme value of patience and perseverance.

His diligence has paid off. In December of last year he came in first place in the Hsinchu City Music Competition, and in March of this year he represented Hsinchu City in the national competition. Despite the stiff competition from a wide array of outstanding musicians, Chung managed to again come in first place.

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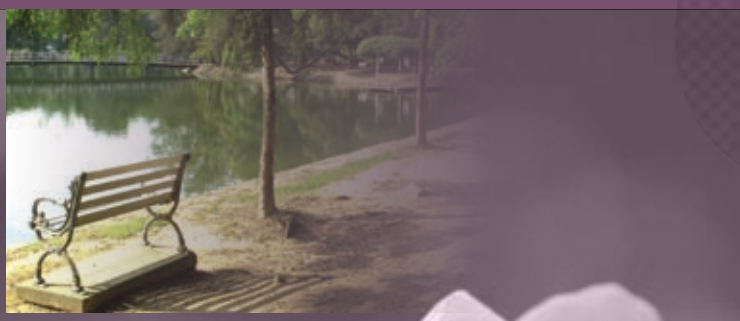
b

a. Nian-Kai Chung practicing the *zhonghu*.
b. Nian-Kai Chung (right) studying directing with Hui-Chang Yan.





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

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