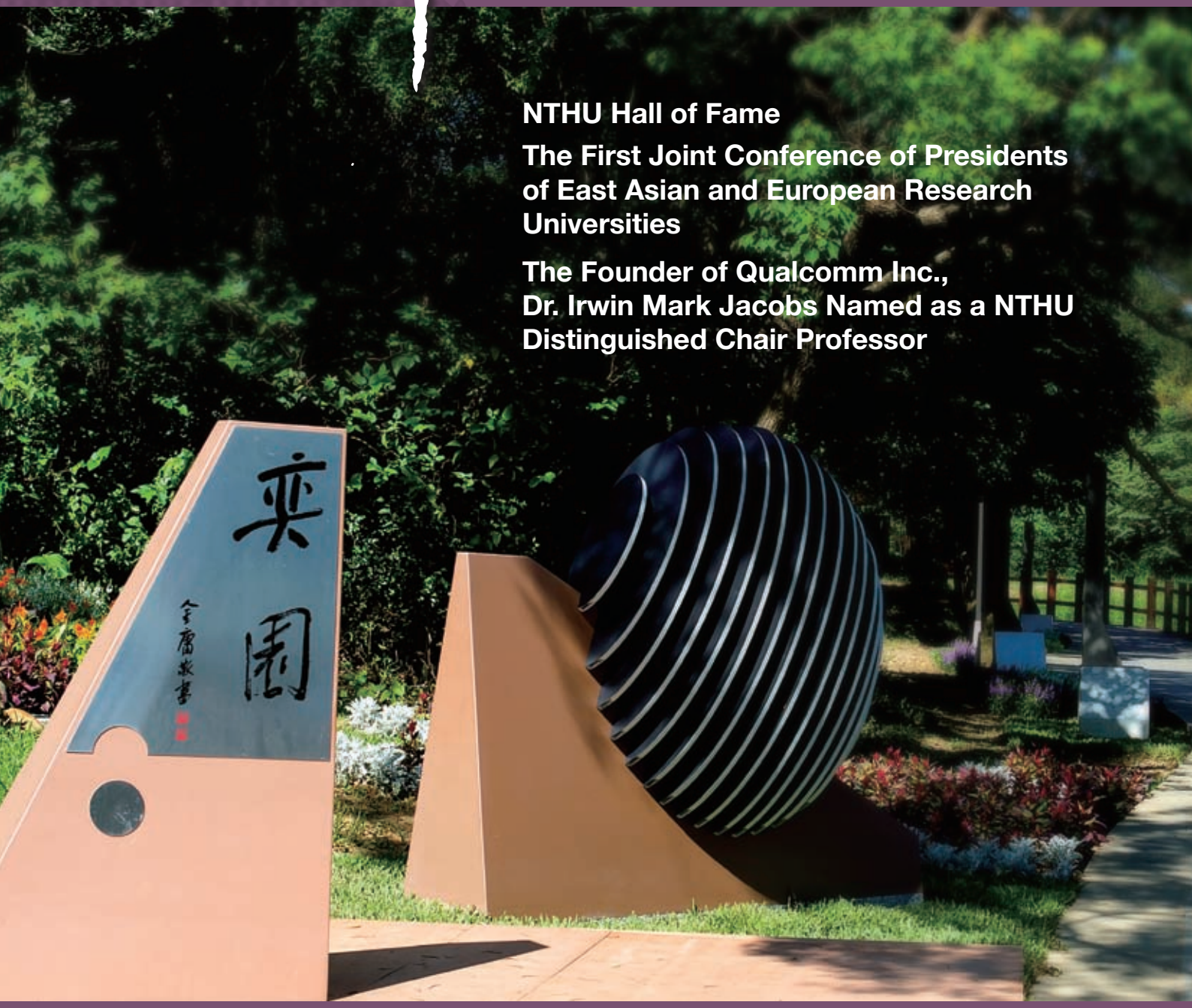
# 清華

NATIONAL TSING HUA UNIVERSITY NEWSLETTER




**NTHU Hall of Fame**

**The First Joint Conference of Presidents of East Asian and European Research Universities**

**The Founder of Qualcomm Inc., Dr. Irwin Mark Jacobs Named as a NTHU Distinguished Chair Professor**

January 2014 | No. 1 | Vol. 8

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## CONTENTS


1 NTHU Hall of Fame

2 The First Joint Conference of Presidents of East Asian and European Research Universities

3 The Founder of Qualcomm Inc., Dr. Irwin Mark Jacobs Named as a NTHU Distinguished Chair Professor

4 Two NTHU Professors Won the National Chair Professorship

5 Professor Mau-Chung Chang Received a NTHU Honorary Doctorate

6 NTHU Hosted the First Taiwanese and Israeli Bilateral Conference on Life Science

7 NTHU Hosted the 14th Cross-Strait Forum on Continue Education

8 NTHU High School Academic Engine is Running Again

9 Professor Shu-Jung Tang's Research Was Reported by *Nature Communication*

10 Two Taiwanese Physicists Elected as Fellows of the American Physical Society


NTHU

# NTHU HALL OF FAME

After a year of construction, NTHU Hall of Fame was officially unveiled on December 19th 2013. Attending distinguished guests at the opening ceremony including NTHU former presidents, Dr. Chung-Laung Liu and Dr. Frank Hsia-San Shu, Physics Nobel Laureate, Dr. Chen-Ning Yang, Chemistry Nobel Laureate, Dr. Yuan-Tseh Lee, former President of Beijing Tsinghua University , Dr. Gu Binglin, and the Secretary General of Nanjing Normal University, Dr. Liao-Yuan Ye.

President Lih J. Chen stated that the purpose of establishing this Hall of Fame was to show our respect to those who have contributed greatly to Tsing Hua, the society, nation and the world, and to honor them as the role models of "Morality, Achievements and Theoretical Contributions." Furthermore, the Hall of Fame also displays the achievements, character, career and works of these giants in the hope to inspire students.

First group of sculptures displaying in the Hall including the personage relief carving of President Yi-chi Mei and the four Masters, which are installed at the entrance of the Hall together with the bronze bust sculptures of Mr. Hu Shih, Dr. Chen-Ning Yang and Dr. Yuan-Tseh Lee. Moreover, the plaque of NTHU Hall of Fame was written in the style of Mr. Shih Hu's calligraphy. President Chen expressed that the personages to

a. Distinguished guests at the opening ceremony of NTHU Hall of Fame.
b. President Chen presenting a souvenir to Academician Yuan-Tseh Lee at the 2013 NTHU Nobel Month.
c. Dr. Chen-Ning Yang with his wife (left) and President Lih J. Chen with sculptor Weishan Wu (right) by the statue of Dr. Yang.
d. Former President Frank Hsia-San Shu, Dr. Ho-Nien Au, Dr. Yuan Tseh Lee and President Chen, Dr. Chen-Ning Yang, and former President Chung-Laung Liu by Dr. Lee's statue. (from left to right)

President Chen presenting the Chun-Shan Shen Lectureship to Academician Chen-Ning Yang at the 2013 NTHU Nobel Month.

be added will include other Tsing Hua giants, such as outstanding alumni, honorary doctorates, former presidents, chair professors and more. He further stated that Tsing Hua's century-old prestige and glory were earned by these giants; it is now the duty and responsibility of our generation to carry forward. President Chen urges the students, staff and alumni alike to follow the footsteps of great mentors and add new blood into NTHU Hall of Fame.

At the opening ceremony, Dr. Chen-Ning Yang indicated that Tsing Hua has a glorious history, and having his statue displayed by the side of Dr. Yuan-Tseh Lee made him especially honored and happy to be at NTHU. Dr. Yuan-Tseh Lee mentioned that he believes the purpose of NTHU Hall of Fame is not to idolize them but to encourage students to surpass them, and he urged everyone to work together and make Taiwan a better place.

## THE FIRST JOINT CONFERENCE OF PRESIDENTS OF EAST ASIAN AND EUROPEAN RESEARCH UNIVERSITIES

On December 7th, 16 presidents/vice presidents from the Association of East Asian Research Universities (AEARU) and their 7 European counterparts from the League of European Research Universities (LERU) gathered at NTHU for the very first time and held the AEARU-LERU Presidents' Forum on the Innovation and Cooperation in Higher Education. This important international and transcontinental conference was the brain child of President Lih J. Chen when he was the Chair of AEARU.

In his opening remarks, President Chen indicated that the interaction

a. AEARU and LERU representatives at the Presidents' Forum.
b. President Lih J. Chen greeting attending AEARU and LERU member representatives.

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The distinguished guests from AEARU and LERU.

between Asian and European academic has been increased recently but we still need a formal mechanism that can bring the leaders of higher education in these two regions together and provide them with an opportunity to have a greater understanding of each other and to work out some cooperative projects that will benefit both parties involved. President Bernd Huber of Ludwig Maximilan University, the Chair of LERU, expressed the same idea and indicated that most European and East Asian universities used to seek their cooperative and exchange partners in North America, but as research universities in these two regions have greatly developed in recent decades, this is the high time for the leaders of AEARU and LERU to meet, to get acquainted and to chart the course of our future cooperation collectively. Representing his colleagues in LERU, he thanked President Chen for initiating and organizing this Forum.

Each of the seven LERU representatives presented a review on the innovative policies that their respective universities have undertaken in recent years. Likewise, delegates representing NTHU, National Taiwan University, Nanjing University, Tohoku University and Tsukuba University also presented their innovative strategies that they have developed to meet the challenges that research universities have faced in a globalizing era.

During the discussion, it was made clear that research universities in these two regions need to further internationalized their campuses. While European universities, on the average, have a higher percentage of international students on their campuses, East Asians universities have roughly around 5% of their respective student bodies coming from abroad. To further increase study abroad and internationalize their campuses, AEARU members will explore possibilities to expand their dual/joint degree program and expand the list of their exchange partners to include LERU members so that students will have the opportunity to experience different academic environments and enrich their curriculum by combining relevant programs that are available in other sister institutions.

# THE FOUNDER OF QUALCOMM INC., DR. IRWIN MARK JACOBS NAMED AS A NTHU DISTINGUISHED CHAIR PROFESSOR

On November 1, 2013, Dr. Irwin Mark Jacobs, the founder and former CEO of Qualcomm Inc. visited NTHU and received a Distinguished Chair Professorship from the university. Many distinguished guests, such as Dr. Morris Chang, Chairman of TSMC, Prof. Frank Hsia-San Shu, the former president of NTHU were invited to witness this special occasion. In his acceptance speech, Dr. Jacobs shared the evolution of wireless communication and the innovative breakthroughs of Linkabit and Qualcomm with an attentive audience.

President Lih J. Chen introduced Dr. Jacobs not only as an outstanding scientist in communication industry but also a giant amongst the US National Academy of Engineering. Dr. Jacobs started his teaching and research career first at MIT and then moved on to UC San Diego. During his teaching days, Dr. Jacobs co-authored a textbook, *Principles of Communication Engineering* in 1965. The revised and expanded edition of this textbook is still used today as the major textbook and considered as the "bible" of communication engineering. In 1985, Dr. Jacobs founded Qualcomm which has since become the leading manufacturer of digital wireless communication products as well as the major provider of related services.

Dr. Jacobs is not only an educator and scientist; he is also a devoted philanthropist. He and Mrs. Jacobs have donated hundreds of millions of dollars to the educational sector and selected by *Business Weekly* and *The Chronicle of Philanthropy* as one of the most generous 50 families in the U.S.

Dr. Jacobs also shared his interesting experience of being a faculty member at a university and the founder of a corporation. He revealed that he did not really foresee the path of his career development. In 1966, when a professor at Cornell University invited him to start up a company, he initially declined the invitation thinking that he did not have any experience in running a business. But he changed his mind after careful deliberation and started the Linkabit and Qualcomm Inc.,

a. The Distinguished Chair Professorship Award ceremony was witnessed with a full audience.
b. NTHU executives with Dr. Jacobs on campus tour.

with another friend of his. When Qualcomm was founded in 1985, the first line of products and services included the OmniTRACS satellite positioning and transmission service, applicable for long distance shipping companies. These initial products and services, however, were not as successful as they would like to see, but the company was not discouraged, they kept improving and expanding their products and services. Qualcomm has devoted a great deal of its expertise to improve the quality of life for the general public. They not only can provide first-hand weather reports to the fishermen and farmers in China but also through communication service platforms to send medical information to suburban areas as well as provide smart electronic products to students from low-come families.

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c. President Lih J. Chen and Dr. Irwin Mark Jacobs, the founder and former CEO of Qualcomm Inc.. (from left to right: Senior Vice President Da-Hsuang Feng, President Chen, Dr. Jacobs, former President Frank Hsia-San Shu, Dr. Keh-Yung Cheng, Dean of the College of Electrical Engineering and Computer Science.)
d. Dr. Jacobs signing for students on his book, *Principles of Communication Engineering*.

## TWO NTHU PROFESSORS WON THE NATIONAL CHAIR PROFESSORSHIP

On November 7th, the Ministry of Education announced the winners of the 17th National Chair Professorship Award. Prof. Cheng-Wen Wu, Department of Electrical Engineering and Prof. Chen-Chi Ma, Department of Chemical Engineering are the two proud winners from NTHU.

Teaching at NTHU for over 26 years, Prof. Wu specializes in IC design. Recently he focuses on the testing and repair of semi-conductor memory and 3D-IC with the goal of increasing its quality, stability and production. His IC memory built-in self-test (BIST) has already been successfully applied to SRAM, DRAM, flash memory, MRAM and RRAM. Working with NTHU' s Center of Innovative Incubator, Prof. Wu has recently launched a new company, Hoy Technologies to further apply his innovative research results.

Since the IC technology entered the SOC and 3D-IC era, it had been


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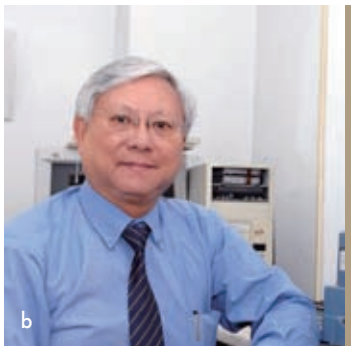
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a. Professor Cheng-Wen Wu.
b. Professor Chen-Chi Ma.

faced with many new challenges, one of which was the increasing cost of testing facilities. To cope with the problem of increasing cost, Prof. Wu designed and introduced a new wireless testing and diagnosis procedure which not only solved many problems of traditional testing but also greatly cut down its cost. Prof. Wu indicated upon receiving this Award that research and teaching should go together hand-in-hand; research leads to the development of new knowledge and technologies which would in turn expand students' horizon. "The establishment of National Chair Professorship highlights the importance and deep connection between research and teaching, and I believe all universities and professors should take the spirit of this Award seriously," said Prof. Cheng-Wen Wu.

Prof. Chen-Chi Ma graduated from National Cheng Kung University in 1969 with a degree in chemistry. He received his M.S. and Ph.D. degrees in 1975 and 1978 from North Carolina University and worked in three different companies for seven years before recruited back to teach at NTHU in 1984.

In his research career, Prof. Ma dedicated himself to the research on polymer materials, environmental and energy technologies. His works on composite materials, nanotechnology, and energy have resulted in more than 250 scientific publications in international academic journals and 150 articles published in domestic academic outlets. In addition, Prof. Ma is the proud owner of 120 domestic and international patents, many of them have been successfully applied in the manufacturing sectors.

In addition to his prolific research agenda, Prof. Ma still had time and energy to assist government agencies, such as Ministry of Education and Ministry of Economic Affairs as consultant to formulate policy and project to enhance Creative Education. For his outstanding research achievements and devotion to the industry, he was awarded with the Outstanding Research Award by the Executive Yuan and the National Invention Award administered by the Ministry of Education.

Prof. Ma is also well-known in the materials science community as the key person who systematically introduced many cutting edge material composite technologies to Taiwan and contributed greatly to upgrade the research level of Taiwanese materials science. Prof. Ma considers the National Chair Professorship as an encouragement and recognition of his effort and thanks NTHU for providing him with a nurturing environment for his research endeavors.

# PROFESSOR MAU-CHUNG CHANG RECEIVED A NTHU HONORARY DOCTORATE

On November 14th, NTHU presented an honorary doctorate to Dr. Mau-Chung Chang recognizing his outstanding research accomplishments and stellar contributions to the industrial sector. Dr. Chang is currently the Wintek Chair Professor of Electrical Engineering as well as the Director of the High Speed Electronic Laboratory at the University of California, Los Angeles. His research team has successfully developed high-speed double heterostructure transistors and integrated circuits with bipolar transistor field effects. Such research accomplishments was successfully adopted by the manufacturing sectors and made the second and third generation cell phones possible. Dr. Chang' s research changed the landscape of high speed electronics, and greatly increased the efficiency of daily life for the general public.

At the awarding ceremony, President Lih J. Chen indicated that Dr. Mau-Chung Chang is an alumnus from the very first class of the College of Engineering and is also the thirteenth NTHU graduates who had the honor of being elected as the Academician of Academia Sinica. Citing his academic accomplishments, President Chen praised Dr. Chang as a shining model for Taiwanese academia.


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a. Dr. Chang's student, who is also a NTHU professor at the Department of Electrical Engineering, Dr. Jenny Yi-Chun Liu, presenting a bouquet to Dr. Chang.
b. NTHU faculty with Dr. Mau-Chung Chang and his wife. (from left to right: former President of NTHU, Dr. Wen-Tsuen Chen, Mrs. Chang, Dr. Mau-chung Chang, President Lih J. Chen, Dean of the Department of Electrical Engineering, Dr. Keh-Yung Chen)

Dr. Chang, in his acceptance speech, stated that he is most grateful for the sound education that he had received at NTHU. In addition to the strong academic training he had received, Dr. Chang is most grateful for the guidance that his mentors had provided him with. "The two years that I studied at NTHU were truly the formative years of my life and my career. The kind of training and guidance that I received from my mentors here at NTHU has become the model of my own teaching career." Quoting two famous sayings of President Mei Yi-chi and Dr. Isidore Rabi from Columbia--- "A university is not made of magnificent buildings but of academic masters," and, "Faculty members are not employees of the university, they are the university;" Dr. Chang accentuated the important roles played by faculty members in a great university. They not only instruct, but also serve their students as mentors who inspire and nurture their students by encouraging them to question, to debate, to create, and, to work as a team.

# NTHU HOSTED THE FIRST TAIWANESE AND ISRAELI BILATERAL CONFERENCE ON LIFE SCIENCE

Over a year of preparation, colleagues from the College of Life Science, NTHU were able to invite a group of top scientists from the Israel Academy of Science and Humanities to Taiwan and held the first bilateral conference with their Taiwanese colleagues. Led by Dr. Ruth Arnon, the Director of Academy of Science and Humanities, a group of 12 delegates; including Dr. Aaron Ciechanover, the 2004 Nobel Laureate in Chemistry and Dr. Ada E. Yonath, the 2009 Nobel Laureate in Chemistry visited NTHU campus on December 9-11 and participated in a two day conference focusing on recent research breakthroughs in life science.

In his welcoming remarks, President Lih J. Chen fondly recalled the fact that Professors Ciechanover and Yonath visited NTHU in 2012 and presented two important lectures in the Nobel Laureate Lecture Series of that year. "It was through such contacts that we have learned about the strong research program in Israel and prompted our colleague in the College of Life Science to organize this bilateral conference in the hope of linking two group of productive scientists and provide them with an opportunity to share their research results as well as to discuss the feasibility of future cooperation between Taiwan and Israeli." President Chen also mentioned that during his visit to Israel in 2013, he was deeply impressed with the innovative effort made by Israel as a country. He believes that such spectacular achievement is probable due to the fact that Israeli people are studious, socially responsible,

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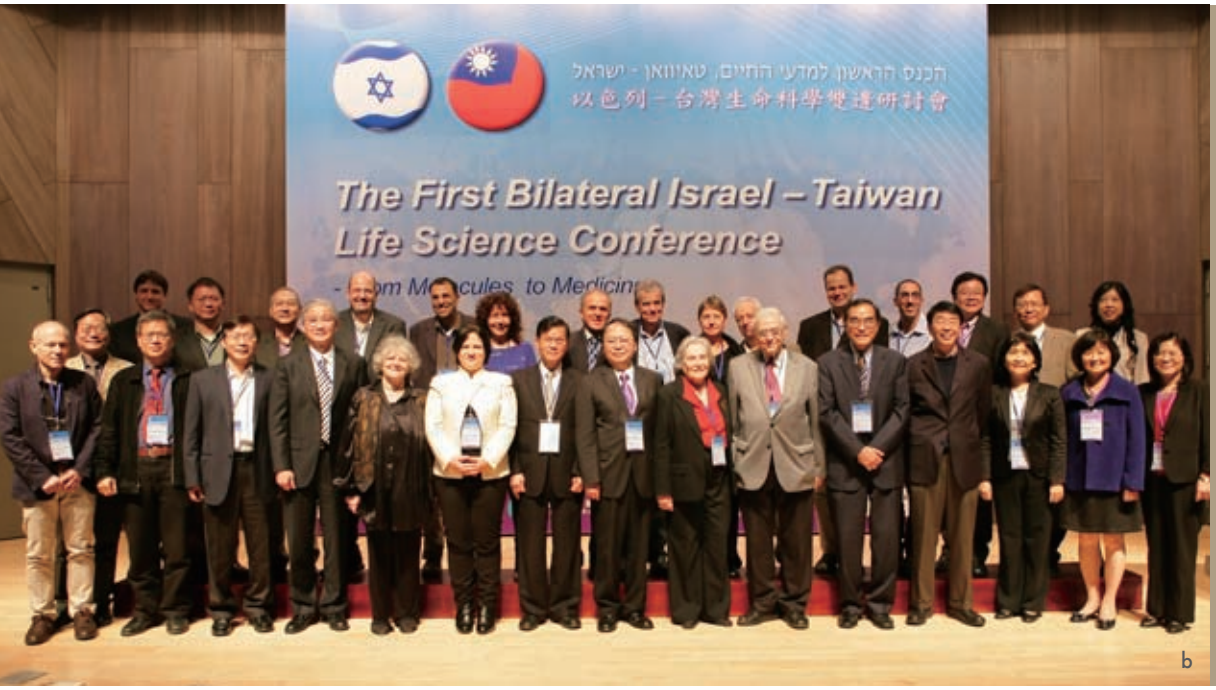

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a. President Lih J. Chen opening the ceremony.
b. Distinguished speakers and participants at the First Bilateral Israel-Taiwan Life Science Conference.

c. Director Ruth Arnon at the conference.
d. Academia Sinica President, Dr. Chi-Huey Wong, sharing his recent research at the conference.

and innovative and have a strong sense of legacy which allows them to pass on their values to the future generations. President Chen furthermore emphasized that our interaction and exchange with Israeli colleague should not be restricted to specific research projects, we should also take note of the Israeli national character and make a strong effort trying to understand their culture which he believes is the cornerstone of Israeli success story.

Prof. Ruth Arnon is an immunologist and the developer of Copaxone, a drug to treat multiple sclerosis. In recent years, she has devoted a great deal of effort trying to have her colleagues' research results transferred to the pharmaceutical industry to benefit the general public. She indicated that research conducted at universities and research institutes not only increase our knowledge, it also has practical value and should be effectively transferred to the industrial sector to improve the quality of life for the general public as a whole.

Prof. Yen-Chung Chang, Dean of the College of Life Science, indicated that this conference covers many emergent fields of modern life science, including cancer research, neuroscience, bioengineering, protein structure, molecular mechanism of diseases and cross-disciplinary medicine. All participants, whether from Taiwan or Israel are top scientists in their respective fields of specialty. He had high hope that this conference will not only be highly productive, it will also create a sound foundation for the future exchange and cooperation between scientists in the two countries.

# NTHU HOSTED THE 14th CROSS-STRAIT FORUM ON CONTINUE EDUCATION

The 14th Cross-Strait Forum on Continue Education, which attracted more than 90 participants from 22 universities across the Taiwan Strait, was successfully held on NTHU' s campus last October. This Forum was first initiated by Zhejiang University 14 years ago. Member universities of this Forum are all elite institutions of higher education that place a strong emphasis on continue education to serve the general public in their respective communities.

The themes of this year' s Forum were: Innovative Diversity, Life-time Learning, Internationalization and the Development of Unique Features. President Lih J. Chen and Vice President Jianhua Yan of Zheijiang University opened the forum with inspiring speeches and indicated that the forum is organized to promote the development of cross-strait post-secondary education, to facilitate cooperation and exchange amongst members and to share successful experiences of educational programs as well as to explore new opportunity for further cooperation and exchanges. Participants exchanged openly on the major challenges faced by the continue education community such as marketing and development, quality control and recruitment, current status and strategies to attract seniors to participate in continue education. Two keynote speeches were presented at the Forum by the Vice President for Academic Affairs, Dr. Sinn-Wen Chen from NTHU and the Dean of Student Affairs, Dr. Ming-Lieh Wu from Jinan University respectively. Dr. Chen discussed the impact of internet and how such new technology has become the main focus of contemporary education. He further illustrated how internet can overcome the limits of time and space and creates a new relationship between the teachers and learners. The Massive Open Online Courses (MOOCs) was introduced in 2012. It differs from Open Course Ware (OCW) in its capability to allow on online interaction between teacher and learner. NTHU currently offers 54 OCWs covering engineering, natural science and humanities. Each of these courses is taught by award winning instructors. In addition to rich curriculum, NTHU has also joined the YouTube and launched the YouTube EDU on January 2013 to link up with popular online courses worldwide.

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a. Participants of the 14th Cross-Strait Forum.
b. Vice President Jianhua Yan of Zhejiang University (left) and President Lih J. Chen (right).

# NTHU HIGH SCHOOL ACADEMIC ENGINE IS RUNNING AGAIN

The NTHU High School Academic Engine is widely popular with high school students who are planning to pursue a college education. The third Academic Engine was launched on November 16th and presented lectures and workshops that introduce the joy of learning and the educational opportunity available at NTHU in 14 locations around Taiwan.

President Lih J. Chen introduced the Academic Engine by saying that the program was designed to give back to the society that has provided NTHU with a nurturing environment to pursue academic and educational projects. "Through the Academic Engine Program, we annual bring NTHU to various localities around Taiwan, especially to high school student in places that are relatively isolated and had little contact with any major university. With the cooperation of various high school principles, NTHU presented public lectures and workshops to introduce the programs that are available on our campus so that the aspiring high school students will have a greater understanding of university education and can make an informed decision in their search for a university where they would like to enroll."

Prof. Sinn-Wen Chen, Vice President for Academic Affairs, stated the fact that even though NTHU is one of the most famous universities in Taiwan, but many high school students and people in the general public are still not very familiar with the kinds of education programs and researches NTHU is conducting. To better inform the public, especially those high school students who are planning to embark on their college education, NTHU launched the Academic Program three years ago. The Academic Engine visited high schools not only in Taiwan but also outlying islands such as Kinmen, Penghu as well as Matsu and bring with them the most updated information about the university as well as a brief introduction on various education programs that NTHU has to offer. The program has received many positive feedbacks from students who took part in its activities.

"This is far more interesting than what we can learn in the classroom or from printed materials. The lecture and workshop presented a clear and interesting picture of what college life would look like and what kind of opportunity that we will have at National Tsing Hua University," said one of the participants.

a. President Chen with the principles of participating high schools and other sponsors.
b. Winners of the essay writing competition of NTHU High School Academic Engine program attended a press conference at NTHU.

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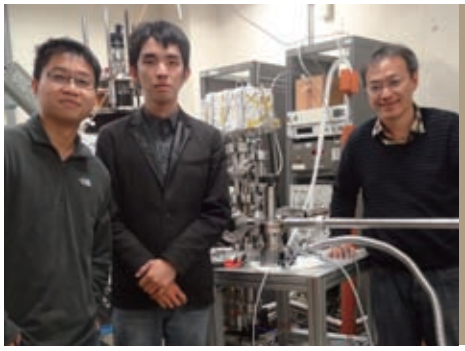
# PROFESSOR SHU-JUNG TANG' S RESEARCH WAS REPORTED BY *NATURE COMMUNICATION*

Dr. Shu-Jung Tang of the Department of Physics and his cross-disciplinary research team's result was reported in a world-class scientific journal, *Nature Communication*, on December 11th 2013.

Dr. Tang indicated that recent preference on things "organic" is not restricted in the selection of food products. Organic materials based on hydrocarbon atoms are currently applied in electronic industries to produce products such as organic light emitting dipoles and organic solar batteries. In the 3C market, organic electronic has also been successful applied to the manufacturing of ultra-thin bendable television panels.

Dr. Tang believes that innovative ideas are as important as new materials! As the electronic products are getting thinner and lighter; and nano quantum size effects has become increasingly important, Dr. Tang and his research team have been using common organic molecule (Copper(II) phthalocyanine, CuPc) in their experiments. The research team built a new model with nano thick flat metallic film (shank down from thick metallic electrode block) and pressed it between CuPc organic film and semiconductor foundation, proving that the nano quantum size effects will produce quantum well state energy to intermediate between organic molecule and semiconductors, which then produced an interface gap state that occurs only when the change of thickness of a metallic film repositions its energy.



Prof. Shu-Jung Tang, Meng-Kai Lin and Ching-Hung Chen. (from right the left)

The gap phase is closely related to the energy level calibration between organic molecules and metallic films; thus, it can point out new methods for controlling the performance of organic electronic devices using quantum size effects. According to Dr. Tang, this is the first time that Anderson electron interaction between zero and three dimension is indirectly observed.

Dr. Tang recalled that during their experiment, within the short beam schedule in the National Synchrotron Radiation Research Center, his research team was often required to grow leveled silver film within an ultra-high vacuum chamber, later transfer to another vacuum chamber to be plated by an organic film, and the resulting products will undergo photoelectron spectroscopy measurement. Thus, they often stayed up late to operate through the cycle dozens of times, and frequently have little sleep for three to four days in a row. However, he is very grateful that their hard work has paid off. Their research result is finally recognized!

The entire experiment was led by Dr. Tang who established the theoretical model and composed the paper. The organic molecules used in the experiment were provided by Professors Yasuo Nakayama and Hisao Ishii of the Chiba University, Japan. The electron energy band calculation was executed by Prof. Jorng-Tay Jeng, a NTHU physicist. All experimental data was measured in National Synchrotron Radiation Research Center 08A1 beam line by Prof. Yasuo Nakayama, with the assistance from Dr. Tang' s doctoral student, Ching-Hung Chen, Chin-Yung Wang and Meng-Kai Lin.

# TWO TAIWANESE PHYSICISTS ELECTED AS FELLOWS OF THE AMERICAN PHYSICAL SOCIETY

Among the list of new fellows elected to the American Physical Society (APS), there are two physicists from Taiwan and both of them are from the Department of Physics, National Tsing Hua University. They are Professors Kingman Cheung and Shangjr Felix Gwo. Prof. Cheung was nominated by the Division of Particles and Fields and the citation for his nomination is: "for his influential contributions to collider physics in and beyond the standard model, especially the origin of electroweak symmetry breaking." Prof. Shangjr Felix Gwo was nominated by the Forum on International Physics and they recognized him "for his important contributions in developing innovative approaches for growth and fundamental studies of semiconductor surfaces, interfaces, and nanostructures; for his experimental breakthroughs in developing plasmonic metamaterials and plasmonic nanolasers, and for his promotion of international collaboration in physics."

Described in the APS official website, the Fellowship is awarded after extensive review and is considered a distinct honor because of the evaluation process. The election to APS fellowship is limited to no more than one half of 1 percent of APS membership for a given year. Echoing how APS describes the importance of its Fellowship, Prof. Ci-Ling Pan, Chair of the Department of Physics at NTHU, stated that "Professors Cheung and Gwo are the only two elected among scientists working in Taiwan this year. I should also point out that up to this point in time, there are only five physicists elected from Taiwan as APS Fellows. This recognition is yet another testimony of the excellence of our Department as well as NTHU."

When President Lih J. Chen was informed of this good news, he excitedly indicated that one of the reasons why NTHU is one of the best universities in Asia Pacific is precisely because NTHU has the right intellectual ambiance to nurture young and inquisitive minds. He is extremely pleased that NTHU has outstanding young researchers such as Professors Cheung and Gwo and the graduate students who collaborated with them. President Chen has no doubt that these young scientists will have other innovative breakthroughs to enhance our understanding on how the universe works!


a. Prof. Kingman Cheung.
b. Prof. Shangjr Felix Gwo.

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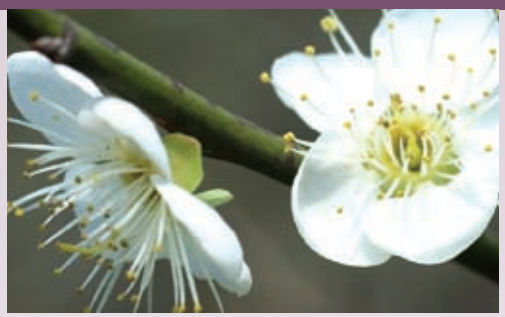


National Tsing Hua University has a long and proud history. First established as the Tsing Hua Academy at Tsing Hua Garden in Beijing in 1911, the Academy was renamed as National Tsing Hua University in 1928 when its curricula were expended to that of a full-fledged university. In 1956, National Tsing Hua University (NTHU) was reinstalled on its current campus in Hsinchu, Taiwan. Since its reinstallation, NTHU has developed from an institute focusing on Nuclear Science and Technology to that of a comprehensive research university offering degree programs ranging from baccalaureate to doctorate in science, technology, engineering, humanities and social sciences, as well as management. NTHU has been consistently ranked as one of the premier universities in Taiwan and is widely recognized as the best incubator for future leaders in industries as well as academics. Such stellar records are particular exemplified by the outstanding achievements of our alumni, including two Nobel laureates in physics Drs. Cheng-Ning Yang and Tsung-Dao Lee, one Nobel Laureate in chemistry Dr. Yuan-Tseh Lee and one Wolf Prize winner in mathematics Dr. Shiing-Shen Chern.

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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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1401302 Macás. TEL:04-24733326