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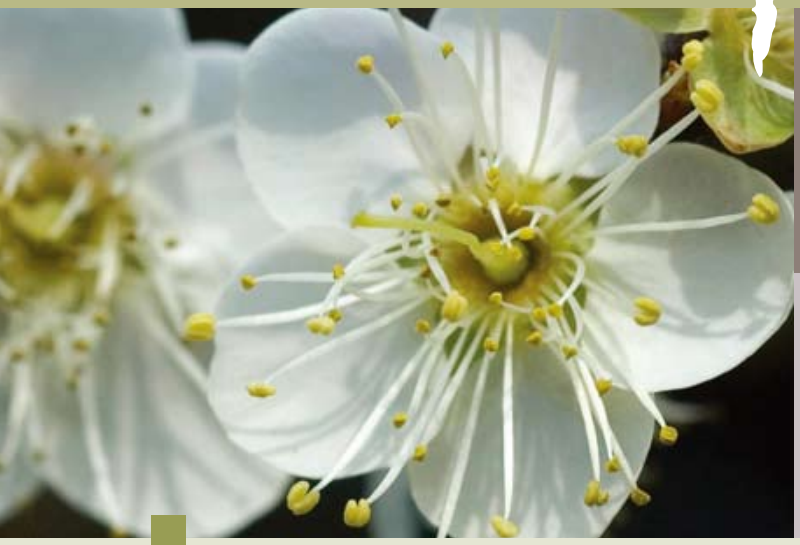


NATIONAL TSING HUA UNIVERSITY

CONTENTS

GRANT OPENING OF THE NEW LIBRARY

ⓐ President Lih J. Chen announced the opening of the new library with a big bang on the gong.
ⓑ Participants of The Great Book Relay.
ⓒ Nearly 300 participants delivered the last collection of books by hands.

After years of planning and construction, a new university library, the Macronix Learning Resource Center is finally completed. On March 4th, a ceremony---The Great Book Relay that transporting books by a hand-to-hand relay from the old library to the new one was held on campus. President Chen together with Mr. Miin Wu, Chairman of Macronix International Co., Ltd and the Library Director, Dr. Hwei-Lin Chuang were among the three hundred enthusiasts who lined up and passed one book at a time from the old stocks to the new shelves in the Learning Resource Center.

President Lih J. Chen joyfully announced that the opening of this new facility is truly a historical moment for NTHU. He also indicated that this is the third relocation of university library since Tsing Hua was re-established in Hsinchu in 1956. With each relocation, the building became larger and more magnificent. President Chen said that "the growth of our library is a clear indication that there is a growing thirst of knowledge as well as an increasing effort to do research and expand our horizon."

President Chen also took the occasion to thank Chairman Miin Wu for this generous donation that made this Learning Resource Center a reality. He believes that the significant donation made by Macronix is indicative of the high value that Chairman Wu and his colleagues place on learning and research, and he urges students and faculty members to make the best of this magnificent facility and resource; to transform information into knowledge and skill. Chairman Wu also indicated at the opening that "our original intention for donating this Learning Resource Center is very simple; we just want to build the best library for the best students and helping them to produce the best academic works."

The Great Book Relay started with a roaring drum performed by the Taingu Club when the first book of the last library stack was delivered out of the door of the old library by Director Chuang. Books were then passed by President Chen to Chairman Wu and went through the hands of more than three hundred dignitaries and enthusiastic students and lovingly shelved in the new library by Mr. Wu Tan, President of International Student Association.

The new library covers an area of more than 27,000 square meters. It will provide many user-friendly facilities. For example, the new library will have more reading space and is equipped with "cell phone booths" so that readers will not be disturbed if someone's hand phone is ringing. The UHF RFID smart library system will provide 24 hours book return service and a self-help reserved book area to facilitate the usage of reserved materials. Moreover, students who are constantly looking for a comfortable reading and studying area will be very happy to find that the library is not only open 24 hours a day but also furnished with comfortable furniture.

NTHU TOPS THE LIST OF NATIONAL AWARD WINNERS

ⓐ Prof. Wei-Leun Fang of Department of Power Mechanical Engineering.

Recently, National Science Council (NSC) announced the recipients of 2012 NSC Outstanding Research Award, and a grand total of ten NTHU faculty members won this prestigious award. Consider the size of our faculty, NTHU is ranked at the top of all universities and research institutes in Taiwan to have the highest percentage of award winning faculty. Prof. Wei-Leun Fang and Prof. Cheng-Kuo Sung of the Department of Power Mechanical Engineering, Prof. Chin-Liang Wang and Prof. J. Andrew Yeh of the Department of Electrical Engineering, Prof. Ann-Shyn Chiang of the Institution of Biotechnology and Brain Research Center, Prof. Ite Albert Yu, Department of Physics; Prof. Hsing-Wen Sung, Department of Chemical Engineering and the Department of Biochemical Engineering; Prof. Chen Fu-Rong of the Department of Engineering and System Science, Prof. Chao-Ton Su. Department of Industrial Engineering; and Prof. Chieh-Yu Chang of the Department of Mathematics are the ten proud winners.

Prof. Wei-Leun Fang specializes in the field of microelectromechanical systems (MEMS). He combines mechanical, mechanical design and microfabrication process technology to develop various types of microelectromechanical sensors, actuator, and systems to achieve slim and light engineering applications. Since Prof. Fang is an expert in both mechanical engineering and semiconductor manufacturing process, he utilizes the characteristics of semiconductor manufacturing process to integrate microelectromechanical components into a single chip using the System-on-Chip (SoC) method, and incorporate variety of chips and parts using the System-in-Package/Assembly method. His research is highly valuable both academically and practically.

This is the second time Prof. Fang won the NSC Outstanding Research Award. Due to the urgent needs of application, Prof. Fang has devoted his effort to the development of micro sensors using basic technology described previously and the results were excellent. He was then invited to attend the IEEE Sensors Conference, the most prestigious international conference in the field of sensory as the Asia Region Program Committee Chair in 2010. In addition, he has successfully competed on behalf of Taiwan to host one of the most important conferences in the field of microelectromechanical, i.e. Transducers, in the year of 2017.

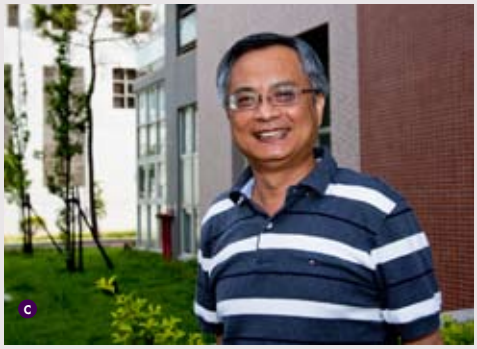
Prof. Cheng-Kuo Sung's field of expertise is in machine kinetics, machinery design, and nano-technology applications in machinery systems. In last fifteen years, while solving the precision errors of the CD-ROM drive, he also discovered that the nonlinear characteristic of support springs in CD-ROM drives vibrate under certain conditions of operation. His laboratory conducted an in-depth investigation of the basic theories to analyze every possible dynamic response that could influence the performance of

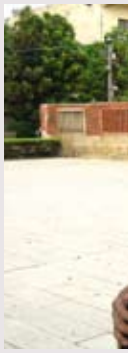
the CD-ROM and effectively resolved the unstable vibrating problem. Prof. Sung took a step further by utilizing this unstable phenomenon to design a centrifugal pendulum and hula hoop energy capturing mechanism, which increases the energy capturing efficiency by using the unstable vibration produced by the mechanism. This research resulted in over twenty research papers published in the best international journals, and became the most frequently cited references internationally.

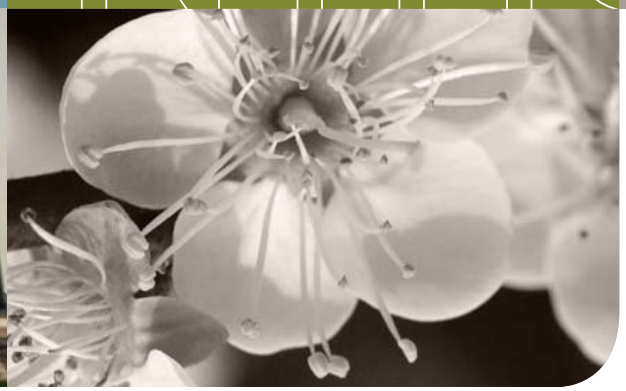
In addition, Prof. Sung and his research team expanded their theoretical research on nonlinear dynamic system and free-fall control mechanism, and applied their research findings to an anti-impact design for hand held mobile devices and the rehabilitation of human lower limbs. The above researches were also published in the best journals in the fields and have received patens from the U.S. Prof. Sung believes that guiding students during their research projects, publishing papers that resolves technological challenges, and watching students grow and achieve their goals are the three happiest things in life. He further expressed that he is grateful for the conducive environment provided by NTHU and the Department of Power Mechanical Engineering, and he thanked all the hard work and cooperation of his students and research partners.

Prof. Chin-Liang Wang of the Department of Electrical Engineering has been teaching at NTHU for 25 years. His research focuses on the implementation and design of communication and signal processing system. Aside from searching for theoretical innovation and breakthrough, Prof. Wang also emphasizes on practicality. Currently, he has approximately 60 international journal articles, 150 international conferences papers and several domestic and international patents. His publications are often cited by researchers worldwide and attracted a great deal of attention; especially his research on Orthogonal Frequency-Division Multiplexing (OFDM) delivery system design and VLSI signal process system design. Moreover, Prof. Wang has received the 2012 IEEE Fellow Award for his outstanding contribution on Signal Processing System Algorithm and Framework.

During past few years, Prof. Wang and his research team made a complete and in depth investigation on PFDM/Multi-carrier transmission system within the baseband processing core technology including synchronized, channel estimation, interference cancellation, peak-to-average power ratio reduction/ estimation, resource allocation, and rapid Fourier transform/inverse







transform (FFT/IFFT). Their research findings are not only innovative but also extremely practical, and have since become the key baseband technologies urgently needed in wireless communication system designs.

Prof. J. Andrew Yeh's current researches are: dielectric liquid lens and nanostructure reinforced silicon substrate breakdown strength. Dielectric liquid lens is the first power driven lens in the world and received theoretical patent in 5 different regions. Prof. Yeh's students have established a new company in 2011, and they hope to be merged with other companies to establish and unify new applications, as well as assisting the building of domestic core optical focus and zoom technologies. Moreover, Prof. Yeh used the nanostructures reinforced silicon substrate breakdown technology to increase the anti-destruction strength of chips. This new technology has been validated by experiments as having the capability to increase the chip strength by six folds, surpassing any known methods.

How genes and brain store information is one of the most important and mysteries questions in the field of life science. Similar to the discovery of DNA double helix to the comprehensive understanding of genetics, Prof. Ann-Shyn Chiang's laboratory is building Drosophila connectome as a navigator for the manipulation of neural networks to understand brain function. The research team used self-developed FocusClear high resolution 3D micro imaging technology to reconstruct partial smell signals transmission path (*Cell* 2007, 128:1205-1217), then constructed a standard Drosophila brain, and followed by parsing reconstruction of approximately 10% of the single neurons and the major neural signaling channels in the entire brain (*Current Biology* 2011, 21:848-854；「New York Times」2010/12/14). Through the mapping of neural brain network, Prof. Chaing has discovered that long term memory formation only requires few protein syntheses between a few nerve cells (*Science* 2012, 335:678-685). This research has brought Prof. Chiang the Top Project Award from the NSC in 2011 and also numerous recognitions and awards.

Prof. Ite Albert Yu's research utilizes cold atoms to perform slow light, weak light nonlinear optics, quantum information manipulation experiments. More significantly, his laboratory is one of the earliest and leading research team devoted to the study of cold atoms and slow light. Prof. Yu stated that slow light has the ability to increase the interaction time of light and matter, and low light intensity and nonlinear optic single photon mechanism can reach high efficiency, thus, by utilizing

ⓑ Prof. Cheng-Kuo Sung of the Department of Power Mechanical Engineering,
ⓒ Prof. Chin-Liang Wang of the Department of Electrical Engineering.
ⓓ Prof. J. Andrew Yeh of the Department of Power Mechanical Engineering.
ⓔ Prof. Ann-Shyn Chiang of the Institution of Biotechnology and Brain Research Center with his wife.
ⓕ Prof. Ite Albert Yu of the Department of Physics.

g Prof. Hsing-Wen Sung of the Department of Chemical Engineering and the Department of Biochemical Engineering.

h Prof. Fu-Rong Chen of Department of Power Mechanical Engineering.

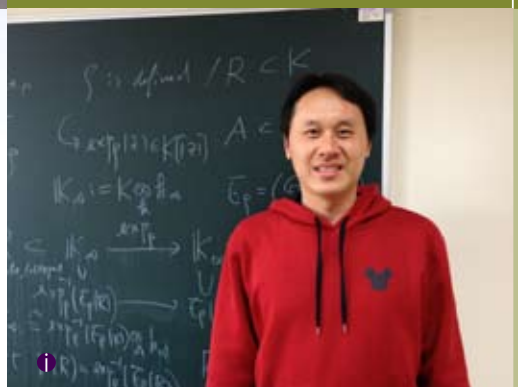
slow light one can provide photon and atomic exchange wave function or quantum state method to be developed into quantum memory. He is confident that all these researches on quantum information manipulation will become influential and important applications in the near future.

Prof. Yu's recent contributions are: the use of optic storage technology to propose innovative photon phase modulation mechanism and its viability; successfully pioneered the new era of low-light nonlinear optics by making light pulse stationary in cold atom, and analogues the light pulse being captured at high Q value of optical cavity. This research was published as a news release in *Nature Physics*, "*Frozen Light Switch*", which reported his research on stopping the second light pulse and bridged its interaction by its atoms to make the interaction time between photons no longer restricted by the pulse movement speed, thus increasing the nonlinear optic efficiency of single photon to the maximum; and enhanced optical storage memory efficiency to 78%. Prof. Yu stated that combining optical storage technology, stationary light pulse, and implementation of single photon phase modulation will usher us into a new era of quantum information manipulation in the future.

Prof. Hsing-Wen Sung specializes in the application of drug/gene delivery carriers, cardiac tissue engineering and regenerative medicine, medical devices and medical imaging related biomedical materials. He has devoted great efforts in the research and development of nanoparticles delivery carrier platform technology on oral absorption of protein, polysaccharide or nucleic acid medications which have brought him much international attentions when it was published on *Biomacromolecules* in 2007. The oral protein drug platform technology is the leading technology in the world, not only was he invited by prestigious academic journals to write various reviews, the research results have also won him 57 patents in the US, Taiwan, Australia, Canada and China. In addition, the technology was transferred to NanoMega Medical Corp. as well. Currently, the largest global insulin producer, Novo Nordics and Eli Lilly, the large pharmaceutical manufacturer in the States are testing and evaluating the oral protein drug platform technology with animal experiment.

Prof. Sung is also assisting a Taiwanese pharmaceutical manufacturer to develop a granulocyte colony stimulation factor (GCSF) drug, and assisting the Development Center of Biotechnology to develop an oral medication for heparin, as well as working with the Industrial Technology Research Institute (ITRI) to develop an oral medication for human growth hormone. Additionally, Prof. Sung and his research team also participated in the research of cardiac tissue engineering and regenerative medicine as well. They have successfully developed medical supplies such as porous myocardial patch, cell film and cell pellets for the application on post myocardial infarction tissue regeneration and ventricular function reconstruction.

Prof. Fu-Rong Chen focuses his research on high resolution transmission electron microscopy, electron optics, phase electron microscopy, energy loss spectroscopy, biomedicine imaging, material analysis and testing. Prof. Chen and Prof. Dirk Van Dyck, University of Antwerp in Belgium, have developed the Big Bang Theory with method and theory of reconstructing three dimensional atomic



- Prof. Chao-Ton Su of the Department of Industrial Engineering.
- Assistant Professor Chieh-Yu Chang of the Department of Mathematics.

structures using single projection direction of high resolution outgoing waves. Their research work has been published by Nature on June 14, 2012. Currently he is collaborating with Oxford Instruments to overcome a high-resolution electron microscope analysis instrument. By next year, with the support of NSC and NTHU, Prof. Chen hopes to establish the first Taiwanese electro-optical instrument company using domestically developed technologies to develop advanced scientific instruments. Furthermore, Prof. Chen and his research team also developed an ultrafast (femto-second) electron gun and electron microscopy "phase plate" supported by Academia Sinica and are currently applying for Japanese patent with JEOL Electron Microscope Company.

Prof. Chao-Ton Su's areas of expertise are: quality engineering, complete *quality management*, Six Sigma, data mining and its application, industrial engineering and management. For past five years, Prof. Su has put a great deal of effort in the research of quality engineering and management, and computational intelligence related researches, such as optimization of manufacturing process design, multi-class Mahalanobis Taguchi system, Six Sigma and other quality related researches.

He had successfully assisted several domestic high tech companies in optimizing their manufacturing processes and raised their production efficiency. Prof. Su also cooperated with Cathay General Hospital to improve various medical quality issues such as sleep apnea syndrome diagnosis, diagnosis of pressure sores during surgery, chemotherapy prescription error reduction and improvement of acute myocardial infarction patients' vascular reperfusion time. Last but not the least, Prof. Yeh not only published his research results in several international journals, he is also the author of several text books such as Quality Management (strongly recommended by renowned quality management master Dr. Noriaki Kano), Six Sigma (first Chinese text book on Six Sigma) and Quality Engineering: *Off-Line Methods and Applications* (published by CRC Press/Taylor & Francis Group and made available worldwide).

Prof. Chieh-Yu Chang's research is focused on number theory, particularly the body of function on transcendental numbers theory. In recent years, he concentrates on the special characteristic p value research, especially special values from geometric invariant or important function value. According to Prof. Chang, the ability to translate the algebraic relations between these values is extremely important and interesting. With the support from National Center for Theoretical Sciences, Prof. Chang and his research partner, Prof. Papanikolas from Texas A&M University, started a long term research cooperation and have elevated their research to the top of this field. They spent four years overcoming many difficulties and finally proved the Brownawell-Yu conjecture: Drinfeld algebraic independent logarithmic function values in the algebraic point. Their research result on Brownawell-Yu conjecture was published in *American Mathematical Society Journal*, 2012, the first Taiwanese scientist ever published in this prestigious journal. Currently, Prof. Chang is expanding his research to characteristic p of multiple zeta values of transcendence and arithmetic geometry structures.

PROFESSOR SUE-LEIN WANG'S TEAM PUBLISHED THEIR RESEARCH IN *NATURE*

The Research team lead by Prof. Sue-Lein Wang, Department of Chemistry, made a breakthrough in the field of polymorphs nonaporous material. Their research paper "*Crystalline Inorganic Frameworks with 56-Ring, 64-Ring and 72-Ring Channel*" was published in *Nature* on February 15th 2013. Their research outcome unraveled the mystery of unsystematic synthesis system of polymorphs nonaporous material that has existed for decades. Prof. Wang's laboratory also developed a system, *NTHU-13*, to allow scientists to cross the boundary between microporous and mesoporous for the first time in history and to fabricate new polymorphs mesoporous material. This system is also the largest known polymorphs framework channel that for the first time, permitting artificial synthesis to exceed natural production. President Lih, J. Chen and the research team held a press conference at the National Science Council on February 26th and proudly announced this significant breakthrough!

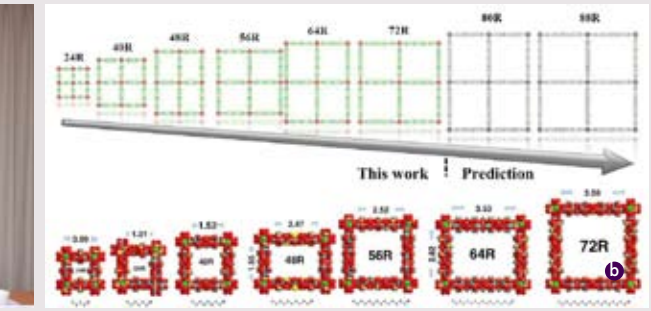
Prof. Wang explained that porous materials such as zeolite exist in the natural with the interior framework consisting 0.3 to 0.7 nm rings. These rings allow small particles to pass through, giving zeolite the property for ion exchange and gas absorption/ separation. Since the 1940s, scientists were able to synthesize the structure of silicate zeolite in the laboratory and understood the relationship of ring interior structure and its activity. During the 1980s, the discovery of aluminophosphate zeolite structure lead to the synthesis of zeolite porous type materials from various chemicals, and the diameter of the microporous (0.3 to 2.0nm) was expended slowly from 0.7nm to 1.3nm. Synthesis method for mesoporous (2 to 50 nm) with diameter larger than 2nm was discovered in the 1990s.

However, due to the limitation of amorphous, the understanding of mesoporous structure was restricted to its ring channel arrangement, the interior structure and composition were more difficult to determine. Prof. Wang stated that "to a material scientist, it is a challenging task to develop methods that can control the size of the rings. From structural point of view, ring size can be expressed by the amount of polyhedron surrounding the hole (or simply called the member ring number)."

After years of great effort, Prof. Wang and her research team obtained an effective synthesis method capable of

continuous producing large inorganic ring framework. The ring diameter can be enlarged from 0.7nm - 3.5nm, crossing the micro-ring material and entering midsized ring category. The system can produce 24, 28, 40, 48, 56, 64 and 72 rings, greatly surpasses previous record of 30 rings.

This is the first time synthetic nanoporous polymorphs material was systemically synthesized. The *NTHU-13* system confirmed that within a single system, diameter of 0.7nm to 3.5nm inorganic channel aperture can be assembled using template aggregation mechanism, achieving seamless integration between microporous to mesoporous types. Up to the implementation and verification of NTHU-13 system, there was no document on any rational design of synthesis of ordered mesoporous sidewall structure. This research outcome is highly innovative and a significant contribution to science. Prof. Wang indicated "this paper not only represents the breakthrough of experimental techniques, but also the capability of using only monoamine surfactant template to gradually push the tunnel from 24R to 72R, as well as busting the myth of amorphous as template guiding aggregation type mesoporous tunnels, which was long held in porous material related fields." President Chen stated at the press conference that "the conceptual breakthrough advanced by Prof. Wang's research team will have a great impact on future synthetic polymorphous nanoporous materials and will lead to major technological innovation."



a President Lih, J. Chen and NTHU executives with the research team at the press conference at National Science Council.

b Prof. Sue-Lein Wang's research team obtained an effective synthesis method capable of continues production of larger inorganic ring framework.

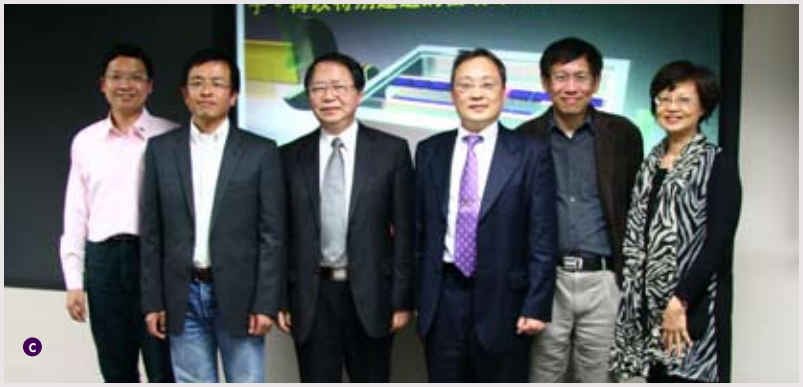
PROTON MAY BE SMALLER THAN WE THOUGHT

After making the cover story of *Nature* in 2010, an international research team led by Prof. Yi-Wei Liu tackled the puzzle of proton size once again through the transition of another muonic hydrogen atom. The measurement of the size of the proton this time is 0.84087 (39) femtometer; consistent with the prior data but the precision of the measurement was increased to 1.7 folds, and the CODATA differences expanded to seven standard deviations and the proton magnetic radius was also obtained. The research result was published on January 25th in *Science.* President Lih J. Chen and the research team held a press conference at National Science Council on March 6th and stated that *Nature* and *Science* are fierce competitors in terms of publishing scientific articles; it is really a rare phenomenon that different stages of the same series of research are published by these two prestigious journals!

Prof. Yi-Wei Liu's atom manipulation laboratory, AMO Research Group, has focused on this program for more than a decade, and they have established a close working relationship with other international research groups. Prof. Liu stated that the last research result, published in 2010 drew much attention globally, and the article was referenced more than 130 times; some researchers who reviewed this article, however, were somewhat skeptical. Luckily, the result of this research can provide more concrete evidences to prove that the size proton may be smaller than we thought!

Proton is consisting of 3 quarks; as a result it is an object with room to expand. The spatial combination manner of quarks with electric nucleus and magnetic property determines the spatial spread of electric nucleus and magnetic property of the proton along with its size. Prof. Liu expressed that the research groups used muons, an electron like elementary particle with 200 folds in mass and shorter life spend, and protons to synthesis muonic hydrogen atoms, and the size of the proton was accurate determined by measuring the energy level of the muonic hydrogen atoms through laser spectroscopy method. Within this exotic atom, the muon with higher mass allows electron to get closer to the proton compare to a normal hydrogen atom, which made the muon heavily influenced by the proton, and thus resulting in the displacement of energy levels. Currently, physicists around the world are eagerly trying to find the answer to the proton size puzzle and related data obtained from the past experiments by using normal hydrogen atoms, and electron-proton scattering are also being reanalyzed, reviewed and re-examined. Moreover, theoretical physicists from different fields are also trying to explain this inconsistency from different angles using interesting theories as well. However, these hypotheses all need

new experiments to verify. “In the future, the new international research team, CREMA of which NTHU’s Department of Physics is a member, will make use of existing experimental facilities to perform and improve muonic hydrogen atom experiments, and the research is expected to establish a clearer direction for solving the proton size puzzle,” said President Chen at the NSC press conference.



a Prof. Liu and his research partner, Dr. Cheng-Yang Kao.

b Prof. Yi-Wei Liu explaining his research result to the media.

c President Lih J. Chen with the research team at the press conference held at the National Science Council on March 6th.

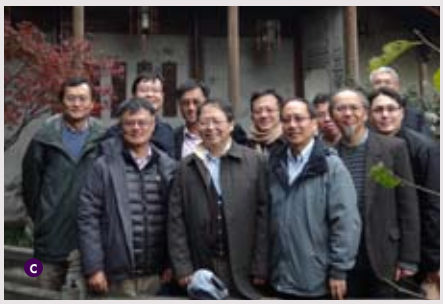
STRENGTHENING EXCHANGES WITH ELITE UNIVERSITIES IN CHINA

NTHU has made concerted efforts to establish cooperative programs with leading universities in China to facilitate student exchanges as well as collaborative research programs between NTHU faculty and their Chinese counterparts. To heighten the visibility of NTHU, President Chen led two groups of faculty and staff members to visit Nanjing University and Zhejiang University last year and presented Tsing Hua Day on these two campuses. The program of Tsing Hua Day included an introduction of NTHU and a lecture series where our faculty members presented their cutting edge researches. In addition, Mr. Li-Pai Chen, Chair of NTHU Alumni Association and Mr. Wang-Ken Wang, CEO of ADATA Technology, who is also an alumnus of NTHU, were also invited by President Chen as guest speakers in these workshops to share their NTHU experience with Chinese students.

President Lih J. Chen opened the Tsing Hua Day at Nanjing University by emphasizing the historical tie between the two universities. He indicated that the two institutions have had a long cooperative relationship. For example, three of the most respected presidents of Nanjing University's predecessor, i.e., Nanjing Central University---Mr. Luo Jialun, Mr. Gu Yuxiu and Mr. Wu Youxun were all Tsing Hua alumni. Nanjing University and NTHU have also established an active student exchange program since 2007; throughout the years there were more than twenty students from Nanjing studied at NTHU campus. Moreover, the collaboration between the two universities has been strongly supported by the Jiangsu Provincial Government, which has recently donated one thousand books published by Jiangsu publishers to NTHU and invited one hundred NTHU students to visit Jiangsu.

a President Chen opened the Tsing Hua Day at Nanjing University.
b Visiting Zhejiang University.
c NTHU representatives visiting the Garden of Hu Xue Yan.
d President Lih J. Chen and the faculty and staff members in Nanjing University.

Likewise, NTHU also has a long and fruitful exchange with Zhejiang University since 2008. To further intensify such exchanges, a Dual Degree Program was established in last August allowing students who participated in the exchange program to earn degrees from both NTHU and Zhejiang University.



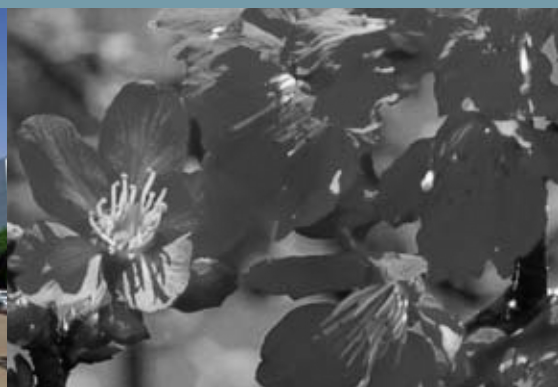
RETIRED BUT ACTIVELY INVOLVED: VOLUNTEER GROUP IS HERE TO SERVE!

Recently, a NTHU Volunteer Group, comprised of NTHU retirees, alumni and staff spouse, was launched. This group conducts campus tours, community service, and social welfare activities. "We are deeply connected to NTHU and highly motivated to present the best of NTHU to the public," said the volunteers.

President Lih J. Chen thanked all volunteers for their devotion to the university and stated that NTHU holds 105 acres of land with buildings scattered in different corners. "In recent years, the number of visitors to our beautiful campus has increased rapidly, and now, with the guidance of our ever so passionate and resourceful volunteers, visitors would have a chance to learn the history behind each campus attraction."

President Chen further stated that the NTHU Volunteer Group is a an enthusiatic promoter of NTHU's involvement in community services. He announced that next year when the Tsing Hua Guest House I-B is completed, there will be a University Hall of Fame housed in the new building, and that NTHU Volunteer Group will be in charge of introducing each important Tsing Hua historical figures featured in the Hall. Currently the Volunteer Group has a total of 25 members with a headquarter on the first floor of the Administration Building I. Their office hour is from 9:00 to 12:00pm and 14:00 to 17:00pm Monday through Friday.

a NTHU Volunteer Group is consisted of members of Tsing Hua family. They aim to provide the best service to the visitors, community and society.
b President Lih J. Chen and the volunteers.
c NTHU souvenirs displaying at the reception.



PROFESSOR KOU-NING CHIANG RECEIVED 2013 IEEE FELLOWSHIP

Recently, an IEEE Fellow Award was presented to Prof. Kou-Ning Chiang of the Institute of Electrical and Electronics Engineers for his outstanding contribution to the analysis of microelectronic packaging, mechanical and electronic components, basic and applied research, and verification of design and reliability assessment. Prof. Chiang is the first faculty member of mechanical engineering to receive both IEEE Fellow and ASME Fellow. Prof. Chiang is currently the Editor-in-Chief of Transactions on Components, Packaging and Manufacturing Technology Journal (IEEE Transaction on CPMT), as well as one of the seven IEEECPMT Board of Governors. He attended many important IEEE/ ASME international conferences as program chair/co-chair, technical program chair, session chair and keynote speaker, which clearly indicated his influence on foreign and domestic microelectronic packaging research. Prof. Chiang has published over 300 papers on microelectronic packaging/MEMS in nanotechnology related journals. He also holds 52 patents with several 3D stack packaging (such as Taiwan patent I400589, I269460, I264103, US7884464, US20080142941) incorporated into the packaging structural roadmap. Prof. Chiang's research focused on the Design on Simulation and Simulation Based Science and Technology. During his two years of affiliation with the National Center for High-Performance Computing as its Director, super computer---FORMOSA 4 and FORMOSA 5 were designed under his directorship and took a spot in the top 500 supercomputers in the world. Moreover, Prof. Chiang invested a great amount of effort into the unification of technology and humanity; for example, the Smart Cloud Render Farm System built by his research team is widely received by the cultural and creativity industries and is instrumental in the newly emerged 3D animation in Taiwan.

Prof. Chiang is the first domestic mechanical engineering professor to receive IEEE Fellow and ASME Fellow.

CELEBRATING THE YEAR OF SERPENT

On February 18th, NTHU celebrated the Chinese New Year in the Auditorium with an attendance of hundreds of staff and retirees. President Lih J. Chen kicked off the festivity by greeting everyone with a New Year Wish, wishing all a prosperous, productive and happy Year of Serpent. He also took the occasion to thank all the students, faculty and staff members for their active participation and contributions in all of the major events that NTHU had organized during the previous year. He proudly recalled that our colleagues had four major publications in the most prestigious scientific journals, such as *Science* and *Nature* last year. Such stellar record, such stellar record, however, is very likely to be repeated or surpassed this year. As we are just starting a new year, he reported that NTHU has already witnessed Prof. Sue-Lein Wang, Dept. of Chemistry, and Prof. Yi-Wei Liu of the Dept. of Physics having their newest research results published in *Nature* and *Science*. Furthermore, ten of our colleagues are proud winners of the Outstanding Research Award administered by the National Science Council which placed NTHU in the first place among all the universities and research institutions in Taiwan when we factor in the size of our faculty and amount of awards won by their respective members. During his address, President Chen also praised Mr. Yu Lo, a graduate student at the

a President Lih J. Chen wishing everyone a Happy New Year!
b Tiangu Club's drum performance.
c Hip pop dancers.
d Senior Vice President Ming-Chuen Yip (Centre) performing with the NTHU staff ukulele club.

Institute of Biotechnology for the book, *Meeting Taiwan at the World's End*, he wrote and published. Mr. Lo documented, in this book his experience at Linkoping University as an exchange student; his bicycle journey in Switzerland and the success stories of many overseas Chinese who had settled in that country.

Following President Chen's New Year address was an exciting program of songs and dances such as Mid-Eastern belly dance, acappella performance from the Seagull-K Vocal Band, ukulele melody by NTHU staff, and the hip pop dance club. The climax of the program, however, was probably the magic performed by Senior Vice President Ming-Chuen Yip and Prof. Kok-Hwan Tan. They stung the audience and had them walking away wondering how they were able to pull off the tricks!

ⓐ Mesmerizing belly dance.
ⓑ Seagull-K Vocal Band filling the house with joyous new year songs.
ⓒ President Chen and other executives singing Ta Xue Xun Mei.
ⓓ Prof. Kok-Hwa Tan's magic show.

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