



NATIONAL TAIPEI UNIVERSITY OF TECHNOLOGY

## TAIPEI TECH POST

Taipei Tech Hosts  
First ISTSChicony-Taipei Tech  
Laboratory Opens"Breathable" Ecological Bricks  
Cools-off Our PlanetNew Acamedia-Industry  
Training Program

## Taipei Tech Hosts First ISTS in Taiwan



Fifth to the left: Taipei Tech President Leehter Yao, on his right, Dr. Kawaguchi Junichiro of the Japan Aerospace Exploration Agency

Held in Taiwan for the first time, the 2014 ISTS (International Symposium on Technology for Sustainability) ran from November 19 – 21 at Taipei Tech. Kawaguchi Junichiro of Japan Aerospace Exploration Agency was a keynote speaker at the symposium. More than 420 experts, scholars, and students from Japan, Taiwan, Thailand, Hong Kong, and Malaysia gathered at the symposium and exchanged 239 research results on applied sciences,

from such areas as electrical engineering, mechanical engineering, nano technology, and information technology. Not only did this symposium broaden students' horizons, visits to Taiwan's famed night markets after the symposium also excited their taste buds with the seemingly endless variety of Taiwanese snacks.

Japan's National Institute of Technology (NIT) manages 51 junior colleges and is in charge of higher technical and vocational education. Each year, NIT chooses one country to co-host the ISTS. Previously, ISTS had been held in Singapore, Thailand, and Hong Kong. ISTS is specifically held for college students to encourage them to begin doing research, build their professional networking, and cultivate their leadership skills during their undergraduate studies. This year, the fourth ISTS is held in Taiwan and co-hosted with Taipei Tech.

The conference is a major international event. About 170 experts and scholars and 252 college students from Japan, Thailand, and Taiwan attended this year's symposium. Attendees includes internationally

(continued on p.2)



Email

oia@ntut.edu.tw

Editor in Chief

Sheng-Tung Huang  
(Dean of Office of  
International Affairs)

Editorial Team

Jennifer Hwang  
Ian Mai-Chi Lok  
Helen Yang

Writer

Jennifer Hwang





Student at ISTS



Student welcoming participants outside the MRT

renowned scientist, Junichiro Kawaguchi, who launched the unmanned spacecraft Hayabusa that successfully returned a sample of material from a small near-Earth asteroid.

To encourage college student to discover new areas of inquiry, cultivate their ability in practical research, and expand their international horizons, the symposium only accepts paper submissions from college students. Accepted authors have the opportunity to present their papers in English or exhibit their ideas on posters. During each session, a best presentation award is given to one of the young scholars.

Taipei Tech President Leehter Yao notes that the junior colleges that participate in ISTS are all iconic schools from Japan. The symposium encourages college students to do practical research, which is also a unique characteristic of Taipei Tech's education. ISTS allows students to be able to participate in academic research and presentation at the undergraduate level. Not only does the symposium promote collaboration, dialogue, and collaboration between international faculty and students, it also stimulates innovative thinking and the exchange of research results. ISTS provides important learning experiences for students, and at the same time, makes contributions to current research in various areas.

ISTS President Hidefumi Kobatake said ISTS has always been a favorite of professors and students because it fosters deep international exchange. To strengthen students' communication skills using different languages, this year, ISTS set up the International Student Organization Committee (ISOC)

that allowed students to help plan the symposium, various activities, and online marketing.

In March, 6 student representatives from Nagano National College of Technology visited Taiwan. In July, Nagano National College of Technology hosted Taipei Tech students and students from other countries. These meetings allowed ISOC to discuss and make concrete plans on various activities. Students' efforts made ISTS a symposium that is planned by the students and for the students. The ISTS experience was made more fruitful and successful through cultural exchanges.

The ISOC also planned cultural exchange activities for the professors and students, including Taipei Tech Archives, Mineral Museum, laboratories, and companies founded by successful Taipei Tech alumni— Everlight Electronics and Ruentex. One of the most anticipated activities was "Night Market Adventure." Students were divided into groups and were assigned different night markets. Each student was given 13USD and must find and eat the recommended foods on the "mission cards," including Taiwanese sausage with sticky rice, pig's blood pudding, braised pork rice. Students were also recommended to play pinball machines, gold fish scooping, ring toss and other night market fun. "Night Market Adventure" was such a fun experience that professors also formed their own teams to join in on the fun. The ISTS is no doubt an unforgettable experience for all the participants.

## Chicony-Taipei Tech Laboratory Opens on 104th Anniversary of Taipei Tech



Chicony Group Vice Chairman M.K.Lin (left); Taipei Tech President Leehter Yao (middle), Chicony Group Founder Kun-Tai Hsu (right)

In response to the academia-industry collaboration policy promoted by Taiwan's Ministry of Education and to develop an advanced tech research environment, Taipei Tech integrated the research capacity of Chicony Group—which is founded by distinguished Taipei Tech alum, Hsu Kun-Tai—and established the Chicony-Taipei Tech Laboratory. The opening ceremony was held on November 1. In the future, both Taipei Tech and Chicony can share research resources and results. Chicony Group also funded the highest scholarship for graduate studies in Taiwan, providing each selected graduate students 26600 USD and PhD students 50,000 USD. Chicony guarantees students jobs after they graduate.

On Taipei Tech's anniversary last year, Chicony Group donated over 3 million USD to build the Chicony Building in the near future. This year, Chicony Group helped establish the Chicony-Taipei Tech Laboratory and provided the highest scholarships in Taiwan. Thanks to the substantial contribution of Chicony Group and alumni, Taipei Tech continues to be a world-renown university.

Under the guidance of President Leehter Yao in recent years, Taipei

(continued on p.3)



Inside the Chicony-Taipei Tech Laboratory



Inside the Chicony-Taipei Tech Laboratory



Center: Prof Hsien-I Lin and the Graduate Institute of Automation Technology showing a student how to operate a robotic arm at the Assistive Robotic Lab

Tech's research breakthroughs, student and faculty performance, and international ranking have met unprecedented success. Chicony found a research partner in Taipei Tech, which has a great academic reputation in the business community. Together, both institutions formed the Chicony-Taipei Tech Laboratory. Taipei Tech planned the space, while Chicony Group invested in the research equipment. Chicony will donate over 300,000 USD to the laboratory for original research and technological breakthrough, especially for planning the manufacturing process that is urgently needed for the automation industry, allowing development and production to synchronize with manufacturing.

The laboratory includes power electronics research group, automation and visual research group, software development group. Chicony Group engineers will be stationed in the laboratory and cooperate on research and development with students from Taipei Tech Department of Electrical Engineering and Department of Automation. Through practical operation, not only will Taipei Tech be able to share research resources and results with Chicony Group, students will be able to learn and complete internships—

creating a successful model of academia-industry collaboration in Taiwan.

Chicony Group sees the potential in Taipei Tech students and greatly increased the number of college interns from Taipei Tech. The group is also providing the highest scholarship for graduate students in Taiwan. The Chicony Group will arrange for the students to do paid internships in the company during winter and summer breaks and immediately hires the students upon graduation.

Chicony Group Vice Chairman and Taipei Tech alumnae Mao-Kui Lin points out that the scholarship aims to encourage outstanding students to study at Taipei Tech and allows Chicony Group to cultivate young talents for leadership development. This benefits Chicony, Taipei Tech, and students. Chicony Chairman Kent Hsu emphasizes that the establishment of Chicony-Taipei Tech Laboratory is an important milestone for the group's development. After graduation, outstanding Taipei Tech students will join Chicony Group and bring the competitive edge necessary for the group's growth.

## Taipei Tech "Breathable" Ecological Bricks Cools-off Our Planet

GlobalTiC Award & Forum was held from Aug 18 - 21 at Taipei Tech. Twenty-four teams from 13 countries, including Peru, Singapore, Japan, Russia, Mongolia, the Philippines, Malaysia, Indonesia and Thailand, competed against each other. Seven teams from Taiwan participated in the event. The Taipei Tech team introduced permeable "breathable green pavement" that can effectively cool-off road surface. The production value is estimated to be worth billions of dollars and it is this year's nation-wide technical and vocational university practical topic contest winner.

The GlobalTiC Award & Forum also held a meeting for matching joint ventures, providing the opportunity for talents from all over the world to match with businesses and find business opportunities in new markets.

Currently, bricks on road surface are not permeable and cannot retain moisture. Taipei Tech Department of Mechanical Engineering Professor Chii-Ruey Lin led students in the research and development of "breathing green pavement". In order to lessen the effects of global warming and the temperature increase on the earth's surface, Professor Lin's team made use of clay aggregate mixture to produce ecological bricks. They planted grass in the holes of bricks, making them permeable and water

absorbent.

Taipei Tech's innovative ecological bricks not only add a touch of green to the urban campus, the biggest advantage of



A "breathable" brick

the ecological bricks are their ability to effectively cool down the temperature of the earth's surface. During the summer, the temperature of typical asphalt road surfaces can reach as high as 58C in a very short amount of time. Since the ecological bricks have high moisture content, through evaporation, they can decrease the temperature of asphalt road surface by as much as 20C. "Breathable green pavement" is already in trial production and will be utilized at the National Tao-yuan Agricultural & Industrial Vocational High School. In the future, the green bricks can be manufactured in various shapes and sizes (such as hearts, octagons, etc.)

(continued on p.4)

and custom made to the consumers' orders.

GlobalTIC Executive Director and Taipei Tech President Leehter Yao notes that young people nowadays have many innovative ideas, but lack experiences in managing businesses. Through cultivating young people's entrepreneurial spirit and allowing them to learn across different majors



Taipei Tech professors and students

and disciplines, they can become more well-rounded. GlobalTIC is a forum that constructs a collaborative network of multinational talents and allows young people from across the world to share innovative and entrepreneurial knowledge and skills.



GlobalTIC attendees from all over the world

## Taipei Tech Collaborates with Workforce Development Agency to Create Academia-Industry Training Program



Taipei Tech collaborates with the Workforce Development Agency and opened the first academia-industry training program, "Mechanical Engineering Academia-Industry Training Program." After their four years of studying and training, before they graduate, students will get their education, technical skills, license and jobs all at once. Starting in September, the 35 students in the training program will start their first year of 1,800 hours of professional internship and specialized employment training.

To decrease the gap between theory and application and increase youth employment, the Workforce Development Agency have actively collaborated with different institutions to open training programs. This collaboration with Taipei Tech is also the agency's first academia-industry program, students only need to complete their training step-by-step, and

will be able to receive their diploma, technical skills, and license. Students that graduate from this program will definitely meet the needs of industry and be equipped with the professional skills that will allow them to dive into the real-world environment of industry. Graduation means immediate employment thanks to this seamless integration.

The Mechanical Engineering Training Program is divided into the Mold and Design Manufacturing Group and Computer Numerical Control Machinery Group, each has 18 and 17 students respectively. The training of the Mold and Design Manufacturing Group includes mold press making, mechanical technique, and plastics processing practicum. Meanwhile, the Computer Numerical Control Machinery Group includes internships in precision measurement, computer-assisted mechanical drawing and CNC lathes and milling. All of the classes are designed to give students a solid foundation step-by-step, allowing students to be equipped with the solid practical skills needed for the future.

In their first year, students will receive their professional and job specialization. Students who pass their training will receive a training certificate. During their first year, students will also receive help to take the technician skill certification, such as mold press making, computer numerical control machinery, mechanical processing, and CNC lathes and milling technician certification. During their four years of study, students study at night or during the weekends at Taipei Tech Mechanical Engineering Department for their bachelor's degree. Starting from their sophomore year, students will intern at companies in collaboration with Taipei Tech and the Workforce Development Agency until they graduate.

Wish you have a great day ahead,

A handwritten signature in black ink, reading "Wenlung Li". The signature is written in a cursive, flowing style.

President

TAIPEI TECH

Tel:(+886)(2)27712171#1000

Fax:(+886)(2)27518845

No.1 Chung-Hsiao E. Rd. sec.3

Taipei, Taiwan 10608