



**TAIWAN
TECH**

NATIONAL TAIWAN UNIVERSITY OF
SCIENCE AND TECHNOLOGY

April

2017
NEWSLETTER



New Southbound Policy in Education

Indonesian Entrepreneur Dato' Sri Dr.
Tahir Awarded Honorary Doctorate

INDONESIA

TAIWAN



What's New

Cover Story

- New Southbound Policy in Education

Focus Taiwan Tech

- Taiwan Tech on List of World's Best Employability
- Ten Universities Among Top 100
- Charging Stations Installed by Taiwan Tech
- Taiwan Tech Silicon Valley Center Inaugurated

Awards & Honors

- America's International Design Excellence Award for Foldable Paper Straws
- Internationally-renowned Architects Amazed by Creativity of Taiwan Tech Students



New Southbound Policy in Education

Indonesian Entrepreneur Dato' Sri Dr. Tahir Awarded Honorary Doctorate

Taiwan Tech is the tertiary institution in Taiwan with the highest number of Indonesian students. Recently the university awarded an honorary doctorate to Dato' Sri Dr. Tahir, who is the Indonesian president's special envoy to Taiwan as well as Chairman of the Mayapada Group in Indonesia. Taiwan Tech hopes to inspire its students and faculty members with the story of Dato' Sri Dr. Tahir, who was born into humble circumstances but strived for high ideals as he created his business empire. The university also hopes that students can learn from his business entrepreneurship and philanthropic contributions.

Dato' Sri Dr. Tahir was born in Surabaya, Indonesia. He founded Bank Mayapada in 1998. At present, the Mayapada Group has business subsidiaries in banking, real estate, hospitals, duty-free shops and media. Ranked as the 8th richest person in Indonesia, he is also a philanthropist who has established a foundation devoted to helping families in crises and improving health care. In addition, Dato' Sir Dr. Tahir and Bill Gates signed a memorandum of understanding to each contribute US\$100 million for health programs in Indonesia.

During this visit to Taiwan Tech, Dato' Sri Dr. Tahir also donated 10 billion Indonesian Rupiahs (approximately 23 million NT Dollars), which will be allocated to scholarships for Indonesian students studying in Taiwan Tech and to research grants for joint projects between Taiwan Tech and the University of Gadjah Mada (UGM), enhancing academic exchange between Taiwan and Indonesia. President of Taiwan Tech Liao Ching-Jong mentioned that Taiwan Tech is the tertiary institution in Taiwan which has recruited the most Indonesian students. Many Indonesian graduate students have returned to Indonesia after receiving their master's and doctoral degrees to serve as professors or executives in technology and management, and a number of them have chosen to stay and work in Taiwan.



Dato' Sri Dr. Tahir shared his insights on becoming a successful entrepreneur. He believes that there are three key elements to attaining business success: the ability to create value, to give back to society, and to create business sustainability. Businessmen should not cause harm to others to earn profits, but they should create real value for their businesses with a good conscience and honesty.

He also encouraged the students that human life is about finding a center of balance between rationality and sensibility at home and work. Most importantly, this center of balance should be pointed upwards so that positive energy can be brought out, leading to a more successful life.

Taiwan Tech Indonesian Student Association President Achmad Maulidin (麻奧李) is a graduate student in the Department of Industrial Management. He mentioned that the scholarship donation from Dato' Sri Dr. Tahir is of tremendous help to Indonesian students. In fact, he made up his mind to study in Taiwan Tech due to the university's world ranking and generous scholarships. He is now working on his Chinese, hoping to remain in Taiwan after graduation and find a job related to logistical process improvement.

China Times



Taiwan Tech on List of World's Best Employability



Taipei, Nov. 23 (CNA) The National Taiwan University of Science and Technology (Taiwan Tech) is on the Times Higher Education (THE) 2016 list of the world's 150 best universities for delivering work-ready graduates.

Taiwan Tech ranks 73rd and is one of three Taiwanese universities on the Global University Employability Ranking for 2016.

The other two are National Taiwan University (placed 127th) and National Tsing Hua University (141st), according to the ranking published in the London-based weekly magazine last week.

Taiwan Tech President Liao Ching-jong (廖慶榮) said given that many Asian universities of science and technology have relatively high spots in the rankings, he thinks it is his school's close cooperation with the industrial sector that made it into the top 100.

The California Institute of Technology in the United States tops the ranking, designed by French human resources company Emerging and published exclusively in THE.

The Technical University of Munich in Germany (8th) and the University of Tokyo in Japan (10th) are the only institutions outside the U.S. and the United Kingdom to make it into the top 10 of the rankings.

From the 11th to 20th places, Asian universities took four places -- Hong Kong University of Science and Technology at 13th, National University of Singapore at 15th, Peking University at 17th, and Tokyo Institute of Technology at 20th.

According to THE, to produce the Global University Employability Ranking, an online survey was completed by two panels of participants between April and July 2016. Both panels included respondents from 20 countries, including Australia, Brazil, Canada, China, France, Germany, India, Italy, Japan, and Malaysia.

Others are Mexico, the Netherlands, Russia, South Korea, Spain, Switzerland, Turkey, the United Arab Emirates, the U.K. and the U.S. The first panel consisted of recruiters at management level who have experience of hiring or working with graduates. Each person was given a list of local universities (with the option to add more) and had up to 15 votes to cast for the "universities in (their) country (that) produce the best graduates in terms of employability."

The sample size of recruiters from each country was determined by the country's number of university students, GDP and number of institutions.

Participants with experience recruiting internationally were also asked to select from a global list of universities that they considered "the best in the world when it comes to graduate employability."

The second panel consisted of 3,450 managing directors of international companies. Participants could cast a maximum of 10 votes on both the local and global lists of universities that had been produced by the first panel. They could also add universities from a database.

Votes were then aggregated into scores for each university to produce the ranking.

Most participants in the survey had at least 10 years' experience in the workplace and had worked for firms with more than 500 employees, according to THE.



Ten Universities Among Top 100

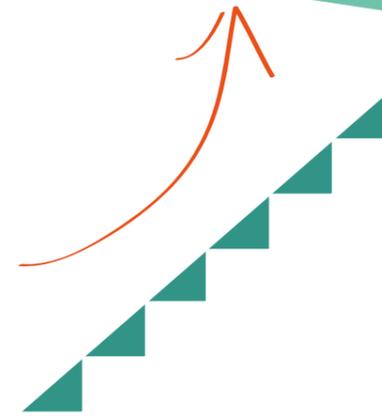
The number of Taiwanese universities in Asia's top 100 fell to 10 from last year's 11, according to the Asia University Rankings released on Monday by Times Higher Education magazine.

Overall, 24 Taiwanese universities made the annual rankings, tying the nation with South Korea in the number of facilities on the list.

The performance of the universities was measured using 13 indicators in five main categories — teaching, research, citations, international outlook and industry income, which refers to a university's ability to reinforce industry with innovation.

The 10 Taiwanese universities in the top 100 list are National Taiwan University (15th), National Taiwan University of Science and Technology (28th), National Chiao Tung University (31st), National Tsing Hua University (35th), National Cheng Kung University (41st), China Medical University (46th), National Taiwan Normal University (68th), National Yang Ming University (70th), National Sun Yat-sen University (73rd) and National Central University (94th).

Ranking between 100th and 200th were Chang Gung University (101-110), Taipei Medical University (111-120), Yuan Ze University (121-130), Asia University, Taiwan (131-140), Feng Chia University (131-140), Kaohsiung Medical University (131-140), National Chung Hsing University (131-140), National Ocean University (131-140), Chung Yuan Christian University (141-150), National Chung Cheng University (141-150), National Chung Cheng University (141-150), National Taipei University of Technology (141-150), Fu Jen Catholic University (181-190), National Chengchi University (181-190) and I-shou University (191-200).



National Taiwan University of Science and Technology (NTUST) made the biggest jump in the list, climbing 34 positions.

China tied with Japan with 39 schools from each nation, while Singapore secured two spots in the top-three with the National University of Singapore (first) and Nanyang Technological University (second).

Nations that invest heavily and carefully to foster world-class universities are more likely to have better performance and gain recognition, said Simon Marginson, a professor at Global University's Institute of Education in London, in an analysis he wrote for the magazine, citing Taiwan as an example.

Magazine editor Phil Baty said that Taiwan has implemented "powerful" policies designed to promote world-class universities, backed by "serious" funding.

NTUST vice president Lee Duu-jong (李篤中) attributed the school's leap in part to changes in the weightings of items used to rank universities.

Lee said that the magazine used to focus heavily on research published in English-language journals, but since last year it has started taking into account research published in Japanese journals, which he said published many papers submitted by the school, resulting in the big leap in this year's ranking.

Another reason was that the magazine significantly reduced the weighting of Asian universities' reputations to have a "fairer" grading system, as most Asian schools are younger than their Western counterparts, he said.

Lee said the reduced weighting was balanced by schools' industrial income, which gave the facility an advantage.

TAIPEI TIMES



Charging Stations Installed by Taiwan Tech in Collaboration with Leading Electric Vehicle Manufacturer Tesla Motors

A university-industry collaboration has been launched between Taiwan Tech and Tesla Motors, America's leading electric vehicle manufacturer. Six Tesla charging stations installed on the Taiwan Tech campus were put into official use yesterday.

In addition to serving as chargers for Tesla cars, these stations will also become in-house training sites for Taiwan Tech students to access first-hand electric vehicle technologies.

Installed within Taiwan Tech, the six "Destination Chargers" reserved for Tesla cars are also the only Tesla charging stations to be found on a campus in Taiwan. One is placed next to the University's main gate for demonstration purposes, while another will serve as a practice site for students, and the other four located inside the parking garage on the B2 level of the International Building are for public access.

Based on the different models, Tesla charging stations can be categorized into Superchargers, Destination Chargers, and chargers which can be installed domestically. Destination Chargers allow for a charge rate that will enable a car to travel 100 km for each hour of charging and are the most common among Tesla charging stations.



Founded in 2003, electric car giant Tesla has led the world into the era of electric cars, promoting the use of sustainable energy. It opened its first flagship store in Taiwan in early September this year, making Taiwan the sixth base for dealerships in the Asia-Pacific region after Japan, China, Hong Kong, Macao and Australia.

The global electric car market has been expanding, said Taiwan Tech President Liao Ching-Jong. There are a number of departments related to the technology of electric cars in Taiwan Tech, including fields in electrical power and electronics, chemical engineering and energy resources, mechanical engineering and so on. The installation of charging stations on the Taiwan Tech campus marks the first stage of cooperation with Tesla; in the future, in-depth university-industry collaboration and research will be carried out to provide students with hands-on internship opportunities, so as to foster local people with expertise in electric vehicles.

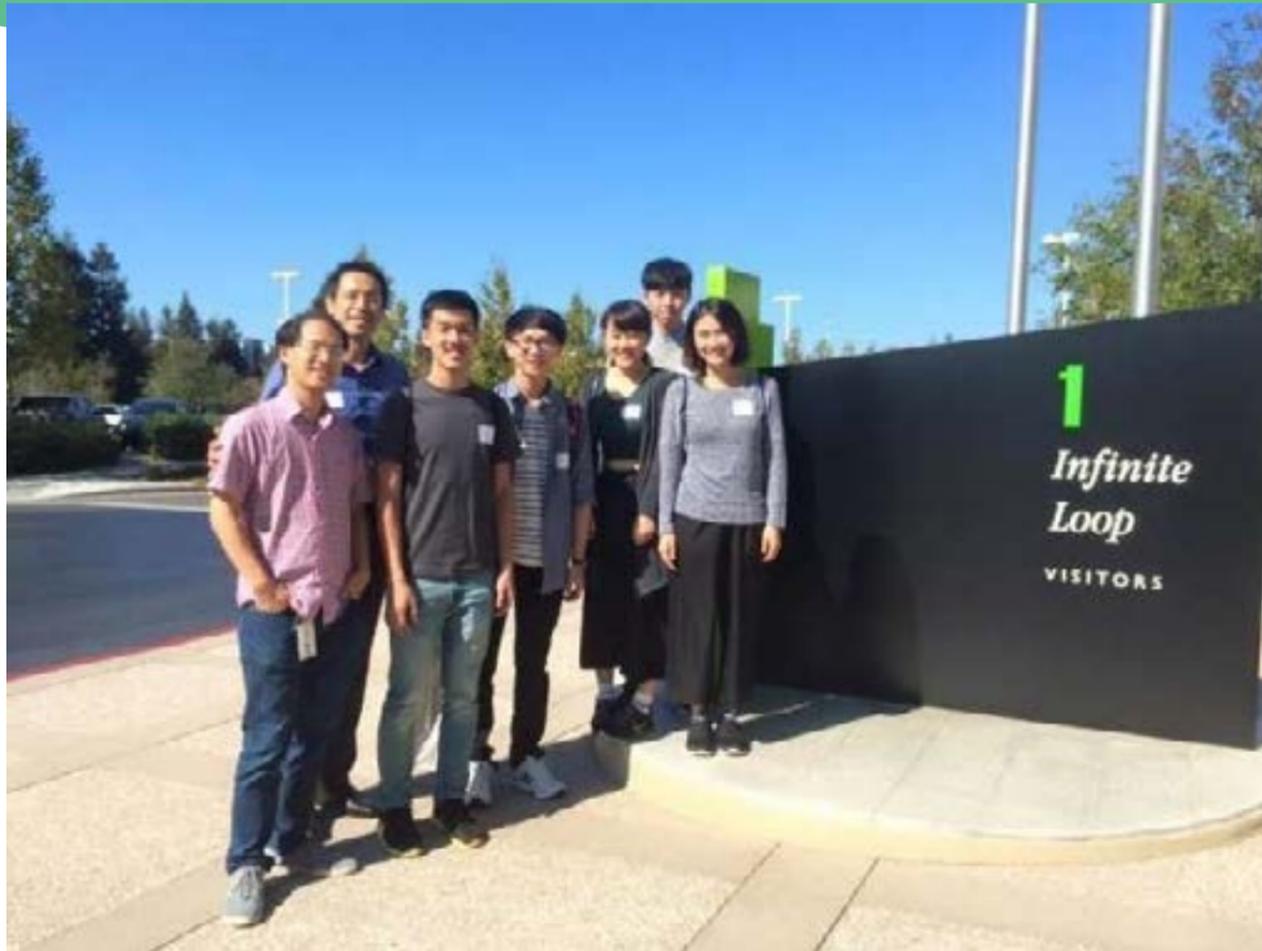
A university-industry collaboration has been launched between Taiwan Tech and Tesla Motors, America's leading electric vehicle manufacturer. The picture shows Taiwan Tech students charging a Tesla car. Image by Taiwan Tech.

President Liao added that it will be possible for Taiwan Tech students to intern or work in Tesla in the future. They will be able to diagnose car issues with professional technicians, learn about how Tesla operates in Taiwan, and delve into related technologies and operational challenges in the electric car industry.

Graduate student Li Gen from the Department of Mechanical Engineering at Taiwan Tech said that his research interest is the energy storage of lithium-ion batteries, which are used in the majority of electric vehicles as energy sources. He is delighted to have obtained an early access to Tesla electric automobiles and some of the latest technologies.

United Daily News

Taiwan Tech Silicon Valley Center Inaugurated



Taiwan Tech startup team Colorgy visits companies in Silicon Valley. (Image by Taiwan Tech)

The Taiwan Tech Silicon Valley Center was inaugurated today (22th September) in Silicon Valley, California, U.S., where startup teams from Taiwan Tech will be sent for training. The university hopes to integrate resources within its alumni network to arrange business visits and create internship opportunities, hoping to facilitate the cultivation of science and technology talent.

Based in Sofia University in Palo Alto, California, the Taiwan Tech Silicon Valley Center is situated in the core area of Silicon Valley where famous tech companies such as Google, Facebook and Apple, as well as Stanford University, are located. President of Taiwan Tech Liao Ching-Jong said that the university encourages faculty members and students alike to form startup teams, and even more urges them to pursue international outreach and interaction with young entrepreneurs from diverse ethnic and cultural backgrounds.

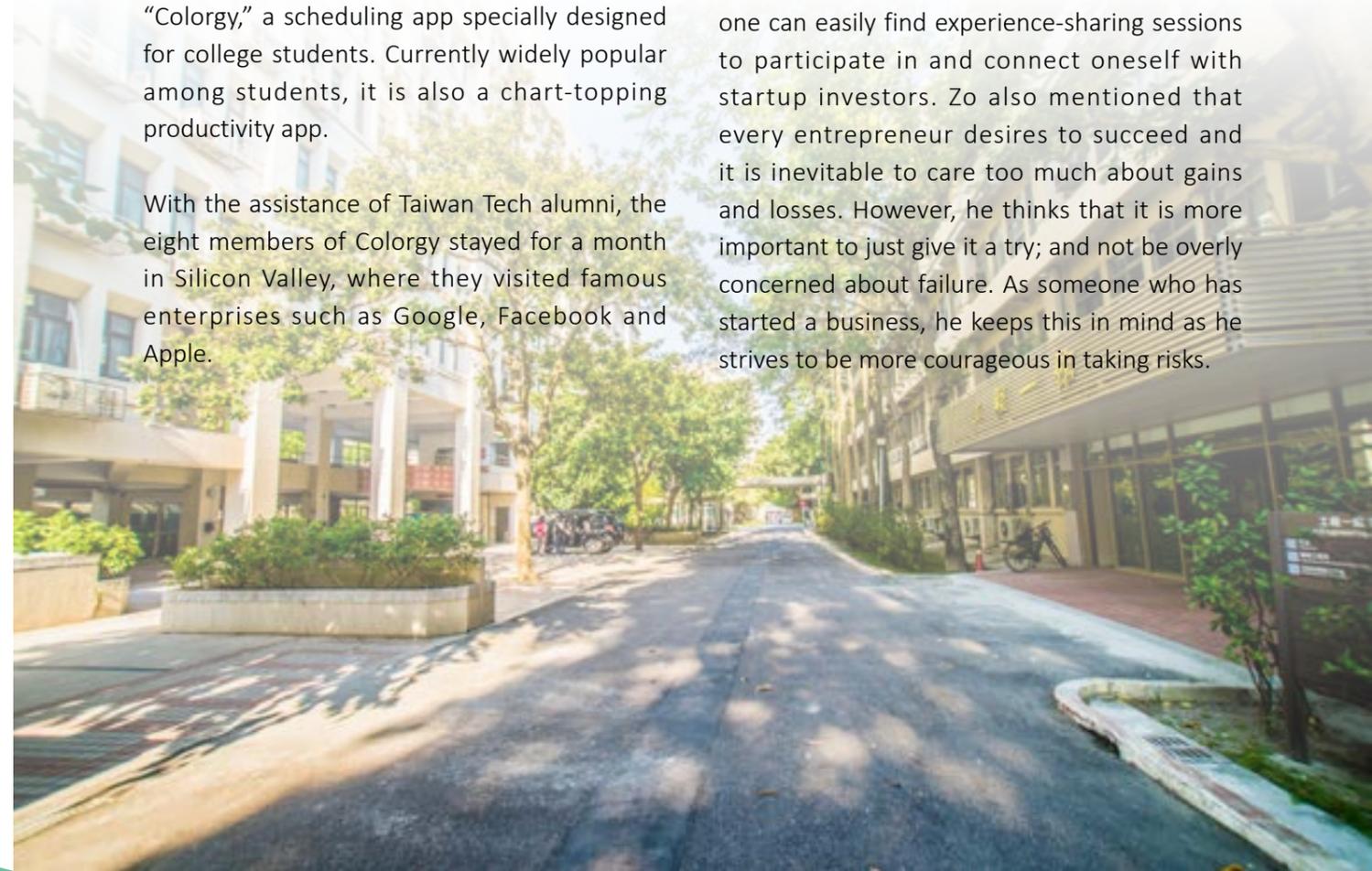
It is also important for the university that these faculty-student teams savor the culture of Silicon Valley, share the latest trends in innovation, embrace the attitude of being unorthodox, adventurous and fearless of failure, and eventually bring this entrepreneurial spirit back to Taiwan.

Taiwan Tech also pointed out that the Taiwan Tech Silicon Valley Center will act as a bridge for technological innovation and entrepreneurship between Taiwan and Silicon Valley. Following the establishment of the Center, the university will select and send one team for training each quarter. Senior interdisciplinary program student in the College of Electrical Engineering and Computer Science Zo Yi-xin is a member of the first team to be chosen for training in Silicon Valley. In his sophomore year he founded “Colorgy,” a scheduling app specially designed for college students. Currently widely popular among students, it is also a chart-topping productivity app.

With the assistance of Taiwan Tech alumni, the eight members of Colorgy stayed for a month in Silicon Valley, where they visited famous enterprises such as Google, Facebook and Apple.

The team also paid visits to Stanford University and UC Berkeley, as well as companies where some of Taiwan Tech’s alumni work. They stayed in a hacker house where they could communicate with people from around the world and participated in several local forums and gatherings. Not only did they experience local culture and campus life but they also had the chance to interact closely with Silicon Valley legend Sherman Tuan (段曉雷), who started his business from scratch.

Zo Yi-xin stated that this training is of great value to him as a startup entrepreneur. What he learned about Silicon Valley is the “attitude” there. He feels that it is a highly internationalized place where ambitious, entrepreneurial, proactive and intellectually curious people from around the world gather. It is also a place full of opportunities where one can easily find experience-sharing sessions to participate in and connect oneself with startup investors. Zo also mentioned that every entrepreneur desires to succeed and it is inevitable to care too much about gains and losses. However, he thinks that it is more important to just give it a try; and not be overly concerned about failure. As someone who has started a business, he keeps this in mind as he strives to be more courageous in taking risks.



America's International Design Excellence Award for Foldable Paper Straws



Foldable straws are light in weight and can be flattened after use for recycling, reducing the damage caused by plastic straws. Image by Taiwan Tech.

A master's student in the Department of Industrial and Commercial Design of Taiwan Tech, Cheng Wang-tung said that he was shocked by the image of a plastic straw embedded in the nostril of a sea turtle. Troubled by the damage to the marine environment caused by large amounts of plastic waste, he designed "Foldable Paper Straws." The simple paper straw and the packaging are of one piece and can be used once the packaging is opened. The design is both convenient and environmentally-friendly and can replace traditional plastic straws. His design has earned the recognition of a bronze award at America's 2016 International Design Excellence Awards (IDEA).



It is estimated that every year as many as 3 billion plastic straws are used in Taiwan. News concerning plastic straws jammed in the noses of sea turtles or eaten by whales mistaking plastic waste for prey is reported from time to time. Cheng said that plastic straws are widely used and disposed of as soon as they are used. The cost of recycling plastic straws is very high, however, and they cannot decompose. The result is that plastic straws often end up in the ocean as marine debris, wreaking havoc on marine ecosystems.



Cheng Wang-tung designed foldable straws. Image by Taiwan Tech.

Cheng added that many sea creatures die from consuming waste thrown away by human beings. When they are autopsied, their stomachs are found to be full of plastic waste. That image astonished him and therefore he began to design foldable paper straws.

"Foldable Straws" replace plastic with paper: Both the straw and the packaging are made of paper. The design comes as a flat paper package and users only need to tear along the dotted lines marked on the paper to release the straw from its packaging. With a gentle push, the straw can assume a cylinder shape and can be readily used. After being used, the straw can be put back into the packaging and flattened for recycling, reducing the space it takes up when discarded.

Cheng mentioned that he has always carried a stainless steel straw with him to replace plastic straws, but he noticed that not many people have done the same. He hopes that his foldable straws can be used in place of plastic ones and that the damage to nature resulting from plastic straws can be reduced. He is now filing a patent application for his design and plans to market it as a commercial product so that more people can use it.

Hailed as the most important design awards in America, IDEA is hosted by the Industrial Designers Society of America (IDSA), which promotes the practicality and commercialization of product designs. IDEA, iF (Germany), Reddot and G-Mark (Japan) are considered the four biggest design awards in the world.

Internationally-renowned Architects Amazed by Creativity of Taiwan Tech Students



Lecturer Toby Burgess of the Department of Architecture at the University of Westminster taught students how to create light boxes in the workshop. Image: Taiwan Tech.

Taiwan Tech hosted the “2016 Digital Fabrication in Spatial Design” workshop, inviting international masters of architecture to introduce students to the use of the newest digital fabrication and 3D printing technology in the process of design, by means of which students can transform ideas into actual products. Pentagon Crystal Shadow, designed by Indonesian-born graduate student Huang You-hsuan (黄友璿) of the Department of Architecture at Taiwan Tech, was selected as the best work in the workshop. Its beautiful and imaginative concept amazed the two guest lecturers.

Taiwan Tech invited Arthur Mamou-Mani and Toby Burgess, both lecturers at the University of Westminster as well as internationally-renowned architects, to acquaint students with how to employ the newest digital fabrication and 3D printing technology in the process of design so as to turn their ideas into actual products.

Arthur Mamou-Mani shared his rich practical experience in the industry, including his dreamscape show window design for British fashion brand Karen Millen, as well as his wave-like ceiling art made with wood. He encouraged students by commenting that the art of architecture should be fun and joyful; while practitioners should enjoy their work every single day, should stay curious and passionate, and should be courageous when faced with challenges.





Under the instruction of Toby Burgess, Indonesian-born student Huang You-hsuan of the Department of Architecture created a three dimensional light box, which was chosen as the best work in the workshop. Image: Taiwan Tech.



Pentagon Crystal Shadow, designed by Indonesian-born graduate student Huang You-hsuan of the Department of Architecture, is layered with triangles of different sizes that are eventually arranged into a pentagon. Light beams travel through the triangles, creating light and shadows that resemble crystal reflections. Chosen as the best work in the workshop, this beautiful and imaginative design not only amazed the international masters but also Huang You-hsuan herself, who stated that the hands-on experience of digital learning was of great benefit.

Another student, Chen Guan-mao (陳冠賢), mentioned that Arthur Mamou-Mani went through everything about the graphics software Grasshopper from the basics to the most advanced applications within a short time. For the rest of the time, the students were then encouraged to explore on their own and to exchange ideas with one another. To him, this kind of proactive learning is more meaningful. Moreover, the software's mode of operation, which rationalizes and parameterizes the design process, has subverted his previous understanding of design, leaving him feeling amply rewarded.

A tall, modern building with a glass facade and a colorful canopy in the foreground. The building has a white and blue color scheme. The canopy is made of colorful panels in shades of green, yellow, red, and blue. The sun is low in the sky, creating a warm, golden glow. The sky is blue with some white clouds.

Publisher: 廖慶榮 Liao, Ching-Jong

Editorial Consultant: Alicia D. Lloyd

Editor: 王孟菊 Wang, Meng-Jiy

Editorial and Translation Staff:

TAIWAN TECH Office of International Affairs/ 許家瑋 Emma Hsu

Layout designer: 楊舒婷 Tina Yang

Published by National Taiwan University of Science and Technology

Tel: 886-2-2733-3141

Address: No.43, Sec. 4, Keelung Rd., Da'an Dist., Taipei City 106, Taiwan