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Taipei Tech Post

National Taipei University of Technology

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SUSTAINABLE DEVELOPMENT GOALS

Taipei Tech Erects a New Monumental Pillar to Celebrates 110 Years of Excellence

Taiwan Vice President Lai Ching-Te, who attended the ceremony, indicated in his speech that Taipei Tech has been one of the most important institutes that facilitates Taiwan's industry development

Taipei Tech held a ceremony on November 26th to celebrate the new monumental pillar erected on campus for the school's 110th anniversary. Taiwan Vice President Lai Ching-te, who attended the ceremony, indicated in his speech that Taipei Tech has nurtured so many talents for the industry over the past years that the university deserves all the credits for its contribution toward the society.

Lai further noted that Taipei Tech has three valuable strengths. The first one is its innovative abilities which enable the school to continuously climb up the world university rankings. The second strength is that Taipei Tech has long been an institute that accentuated industry-academia cooperation and had cultivated many cross-disciplinary talents with high global mobility. Lastly, Taipei Tech has been an integral partner that helped promote national policies such as the 5+2 Industrial Innovation Plan and the Six Core Strategic Industries. These strengths are the reasons why Taipei Tech has been one of the most important institutes that facilitates Taiwan's industry development.

Wang Sea-fue, President of Taipei Tech, indicated that Taipei Tech has recently established the Frontier Institute of Research for Science and Technology that integrates the research on energy, artificial intelligence, and semiconductor. These research fields are in line with the focus of government policies. Wang believes that, with strong research support and solid training, both Taipei Tech faculty members and graduates will be in high demand in the industries.

In 2011, Taipei Tech introduced the One-hundred-year Memorial Park on campus to celebrate Taipei Tech's 100th anniversary. The art installation in the park includes ten stainless steel pillars, with each pillar representing ten years. The size of each pillar varies, symbolizing different phases of Taipei Tech's century-old history. Now, the school added another pillar, donated by alumnus, Wang Hsiao-shen, and designed by teachers and students of Taipei Tech, to celebrate Taipei Tech's 110th anniversary. The new pillar also utilized the same material with jade spar embedded on top, which symbolizes Taipei Tech's evolvement over the past decade.

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In celebration of its 110th anniversary, on November 20th, Taipei Tech held a book launch event for *Excellence*, which includes biographies of 107 distinguished alumni

Taipei Tech's Alumni Anthology Highlights Success Stories

In celebration of its 110th anniversary, on November 20th, Taipei Tech held a book launch event for *Excellence*, which includes biographies of 107 distinguished alumni. The book details their incredible life journeys and stories that reflect the school motto of honesty, sincerity, proficiency, and dedication.

For over a century, Taipei Tech has been educating students who become industry leaders that advance Taiwan's economic. President Wang Sea-fue, who is also an alumnus of Taipei Tech, indicated that the school has long been dedicated to fostering graduates with practical skills, professional ethics, and resilience. "I believe that this new book will motivate our students to pursuit excellence and pass on the winning mindset of Taipei Tech alumni," said Wang.

Three alumni, Lin Wei-zhen, Tseng Jen-shi, and Tan Tan-hsu, were invited to share their life stories at the book launch event.

In 1965, Lin started her study in chemical engineering at National Taipei Institute of Technology (the former name of Taipei Tech). Her expertise led her to publish Taiwan's first inspection manual of composite materials for ships while she was working for the Industrial Technology Research Institute. This manual was later certified by Britain's Royal Institute of Naval Architecture. Lin later joined her husband's company, Three Royal Chemical Industry, and launched many products such as the UV Rigid Inkjet ink. Lin noted that it is the knowledge she acquired and the connections she made at Taipei Tech that contributed to her success.

Tseng expressed his deep gratitude to his alma mater at the book launch event. After he graduated from National Taipei Institute of Technology, he founded his own company that took orders from the Mizuno Corporation and became one of the first Taiwanese companies to manufacture high-quality golf equipment. After years of hard work, he decided to pursue his passion, Chinese calligraphy, upon retirement. In 2020, he held his solo exhibition at Taipei Tech and generously donated all the money received from selling his artwork to the university.

Tan has been teaching at Taipei Tech for thirty-three years and is now serving as the Distinguished Professor of the Department of Electrical Engineering. He has been awarded Taipei Tech's Distinguished Teaching Award and has received many accolades for his research papers in international and domestic conferences. He has advised five doctoral students and over one hundred master's program students, many of whom were international students. Tan noted that Taipei Tech currently ranks 469th in the QS World University Rankings. "I believe that with more international students advocating for Taipei Tech's quality education, Taipei Tech will soon be one of the leading global universities," said Tan.

Taipei Tech students, Chang Yen-yu, left, and Chien Chia-yi, are awarded the 2021 Outstanding Youth Award for their outstanding academic performance

Outstanding Youth Award Winners Demonstrate Incredible Strength and Global Mobility

Taipei Tech recently announced the winners of the 2021 Outstanding Youth Award on December 14th. Chang Yen-yu, master's program student of the Department of Industrial Design, and Chien Chia-yi, five-year junior college student of the Department of Intelligent Automation Engineering, are the winners of the award for their outstanding academic performance.

Chang Yen-yu and her classmates came up with the design concepts of "Barcodiscount" and "Colorwrap" to tackle the issue of food waste. Their designs have won the Best of the Year honor in the 2020 iF Design Talent Award. Zheng Meng-cong, a professor of Taipei Tech Department of Industrial Design and Chang's master's thesis advisor, noted that Chang's biggest strength is her resilience. "Whenever she encounters any obstacle, she overcomes it with a positive attitude," commented Zheng.

Chang studied as an exchange student at Chiba Institute of Technology (CIT) in Japan when she was a junior student in Tunghai University. During her time in CIT, she found that she really enjoys thinking about design and the different approaches to solving a design problem. During this time, she also met one of Zheng's students who inspired her to choose Taipei Tech to continue her education. "I had heard that to study at Taipei Tech is not easy," said Chang, "but I accepted the challenge because I believe that I will learn so much more by choosing the hard way."

Chien Chia-yi is the first student of the Department of Intelligent Automation Engineering to have won the Outstanding Youth Award. Growing up dismantling and studying machines with her father, Chien has always been interested in tinkering with things. "It is very satisfying and rewarding to operate machine tools using my own hands," said Chien. Sun Yin-tung, Chien's academic advisor and professor of the Department of Mechanical Engineering, indicated that Chien always shows her eagerness to learn new things and her strong enthusiasm to help others.

At the age of sixteen, Chien has already participated in the IBM Engineers Week, and her team won third place in the IBM competition. Her team was tasked to build an autonomous delivery car using limited materials and resources. Chien also actively participated in the MIT City Science Summit to learn the demands of the global market. Her future goal is to go to the United States and study among the best students from around the world in a top university.

Taipei Tech, Metro Taipei and hardware manufacturer Acer are collaborating on a new project to advance metro passenger safety through data analysis and AI technologies

AI-driven Technology to Bolster MRT Riders' Safety

Taipei Tech, Taipei Rapid Transit Corporation (Metro Taipei), and hardware manufacturer Acer are collaborating on a new project to advance metro passenger safety through data analysis and AI technologies. A press conference was held on November 8th to introduce the collaborative project that will innovate the transportation system in Taiwan.

Present at the press conference were Ko Wen-je, Mayor of Taipei; Jason Chen, Corporate President of Acer; Peter Chiang, Regional CEO of Acer; Lee Wen-tsung, Chairman of Metro Taipei; Huang Ching-shinn, President of Metro Taipei; Hung Yu-ming, Vice President and Director of Operations Engineering Division of Metro Taipei; Wang Sea-fue, President of Taipei Tech; and Huang Yo-ping, Taipei Tech Chair Professor and project coordinator.

The three parties have established the AI Metro Safety Development Center that incorporates the Acer's state-of-the-art AI technologies, Taipei Tech's innovative research and technical certification, and Taipei Metro's experience and on-site support. The collaboration brings together stakeholders from industry, government, and academia that aim to build the safest and the most convenient public transit system in the world.

With the pandemic regulations becoming a part of everyday life, a gating system that has high-precision AI monitoring can help detect passengers who fail to wear facial masks or have fevers and prevent them from entering the station. The system responds quickly and is backed by big data to effectively raise warnings and inform concerned parties.

The center is also developing another monitoring system to detect unusual passenger flow in metro carriages to raise warnings of potential emergency events. When there is an unusual passenger movement in the carriage, an emergency code and visual image of the carriage will be sent to the control center for possible early intervention. The AI system can also analyze surveillance images and provide instant and precise information on the density and vacancy of the carriage to improve transportation quality and passenger satisfaction.

In addition, an escalator safety system will also be developed to alert passengers with particular footwear (such as rubber flip-flops) that could cause potential injuries to passengers using the escalator.

Taoyuan Hutoushan Innovation Hub Partners with Taipei Tech to Further Development in Smart Technologies

To drive forward the development of advanced technology industries in Taoyuan, President Wang Sea-fue, representing Taipei Tech, and Taoyuan Mayor Cheng Wen-tsan, representing the Taoyuan Hutoushan Innovation Hub, signed an MOU on December 13th. The signing ceremony kickstarts the collaboration between the Taoyuan government, academia, and industry in talent cultivation and development of innovative technologies.

Wang indicated that Taipei Tech has been actively participating in industry upgrades in recent years. "We support important national policies such as the 5+2 Industrial Innovation Plan; the Forward-looking Infrastructure Development Program; and the Six Core Strategic Industries to boost research and development of smart manufacturing, smart railway systems, green energy, IoT technologies, information security, digital economy, 5G technology, and smart healthcare," said Wang. "We have strong dedication to foster innovative talents and to assist companies to adopt the latest technologies."

Taipei Tech and the Taoyuan City Government are currently building a platform where Taipei Tech researchers, industrial partners, and startup companies at the Hutoushan Innovation Hub can further integrate their resources in the development of innovative smart technology.

Cheng noted that Taoyuan has a strong foundation in industrial manufacturing. The newly-established Taoyuan Hutoushan Innovation Hub serves as the first research and development base that has an IoT Cyber Security Center and a Smart Driving Center. The IoT Cyber Security Center features IoT verification and vulnerability assessment, and the Smart Driving Center provides a complete test environment for automated vehicles.

"I believe that, with the help of Taipei Tech's insightful talents and abundant research resources, the Taoyuan Hutoushan Innovation Hub will be a pioneering, diversified, and high-level research base in Taiwan," said Cheng.

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Taipei Tech Makes Greatest Leap in QS Asia University Rankings

The British education consulting company Quacquarelli Symonds (QS) has recently released the result of QS Asia University Rankings 2022. Taipei Tech has been listed in the top one hundred best Asian universities for the past three years. Taipei Tech has also achieved a significant improvement in the Asia ranking, rising from 88 to 76, and its domestic ranking moved from 9 to 8.

The QS rankings utilize eleven indicators to assess university performance, including academic peer review, employer reputation, faculty-student ratio, international orientation, citations per faculty member, and total faculty publications. In the past years, many research papers produced by Taipei Tech professors have been published by the most high-impact global journals listed by CiteScore.

Wang Sea-fue, President of Taipei Tech, pointed out that Taipei Tech has recently established the Frontier Institute of Research for Science and Technology, focusing on the development of energy, artificial intelligence, and semiconductors. "This new institute will work with industry partners in the focused research fields that best suite Taiwan's future technological development needs," said Wang.

Wang further noted that the average income generated by the industry-academia cooperation projects conducted by Taipei Tech reaches four hundred million NTD per year. In the field of smart technology, Taipei Tech has published more than one hundred and eighty SCI journals and over two hundred international conference papers. Taipei Tech has also facilitated over one hundred technology transfer projects and generated over fifteen million NTD.

In the 2022 QS World University Rankings released earlier this year, Taipei Tech has also moved up in ranking and took a leap from 488 to 469. Among all the Taiwanese universities listed in the top five hundred by QS World University Rankings, Taipei Tech made the biggest improvement.

QS WORLD UNIVERSITY RANKINGS
ASIA | 2022

Taipei Tech and Feng Yuan Junior High School Demonstrate Best Practice of Sustainable Education for Woodcraft

With the easing of the pandemic in Taiwan, Taipei Tech was able to promote woodcraft education at elementary schools and junior high schools in November. Feng Yuan Junior High School in Taichung was the first school that Taipei Tech collaborated with to enhance culture and sustainability education. Three hundred students participated in three trial classes to learn all the basics of woodcraft.

The classes were conducted by two teachers, one from Taipei Tech and one from Feng Yuan Junior High School. The students were introduced to documentary films showing six local woodcrafting masters demonstrating woodcraft skills. Taipei Tech provided all the equipment and materials needed to allow students to experience and practice practical skills such as wood identification, inlay, lathe, scroll saw, and wood carving.

Song Jen-ping, the Design Manager of the Taipei Tech Center of Woodwork Technology and Innovation (CWTI) and an alumnus of Taipei Tech, noted that the cooperation project had been planned since the beginning of 2021. "We have finally been able to implement the trial classes that allow both teachers and students to experience the diversity of woodcraft education," said Song.

Thomas C.K. Yang, Vice President and Deputy Director of the University Social Responsibilities (USR) Office of Taipei Tech, pointed out that the Woodcraft Cultural Legacy Renewal Project, initiated by the Taipei Tech USR Office, aims to build aesthetic and practical capabilities in woodworking among elementary and junior high school students. "The project provides a cross-generational and cross-disciplinary exchange platform to reinforce cultural awareness of traditional woodcraft, and it also aligns closely with the United Nation's Sustainable Development Goals of promoting quality education," said Yang.

Huang Yun-siang, one of the students participated in the trial classes, indicated that the classes were very interesting, and she was able to learn about wood materials, woodcraft, and how to make wooden coasters from scratch. Chang Yun-hsuan, another student of Feng Yuan Junior High School, said that her father is in the woodworking industry, and he always shares with her how rewarding his job is. "The trail classes have given me the opportunity to learn more about woodcraft and experience it personally," said Chang. "It is truly a valuable experience."

Feng Yuan Junior High School in Taichung was the first school that Taipei Tech collaborated with to enhance culture and sustainability education

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