# 

NATIONAL YANG MING CHIAO TUNG UNIVERSITY

## The News Annual **Report of NYCU** in 2024

#### **Shaping the Future** of Academia and Industry

In 2024, NYCU demonstrated its strategic commitment to:

In 2024, the National Yang Ming Chiao Tung University (NYCU) English website published **150 news articles**, categorized into **10 main themes**, reflecting the university's dynamic development and its leadership in academia, research, and international collaboration.

This year, NYCU emphasized four key promotional categories: International **Affairs, Academics/Research, Industry** Cooperation, and College Features. To enhance engagement and present more personalized narratives, new sections like President's Letter, Feature Column, and Feature Story were introduced, offering unique insights into institutional values and achievements.

1. Pioneering Globa Collaborations: From signing MOUs in Japan and Southeast Asia to hosting the Taiwan-Malaysia Semiconductor Forum, NYCU continues to strengthen international ties.

2. Fostering Innovation in Semiconductors and AI: Establishing research centers like the Synopsys **EDA/AI** Research Center showcases NYCU's leadership in cutting-edge technologies.

## **3. Driving Sustainability and Net-Zero Goals**: Initiatives such as carbon audits and waste-to-resource projects solidify

With a commitment to consistency, our website maintained a weekly update of 3 articles, achieving an impressive average of **440 views** per piece—marking a significant 200% increase from 2023. International Affairs emerged as the most popular category, particularly articles related to Japan and Southeast Asia collaborations, signifying NYCU's growing global

NYCU's role as a sustainability champion.

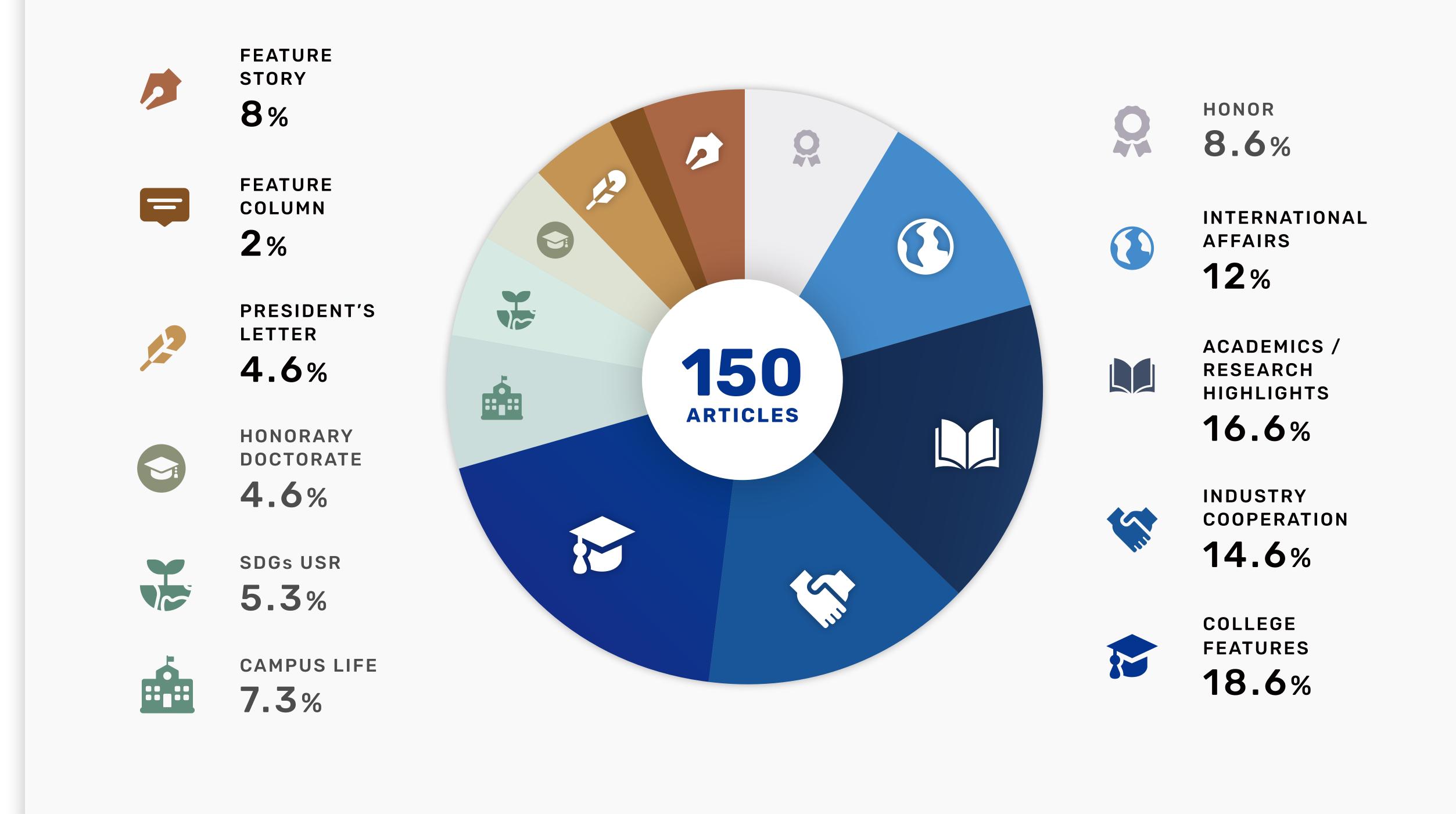
#### 4. Enhancing Interdisciplinary Education:

New programs like the College of Engineering Bioscience integrate engineering, AI, and biotechnology to shape the future of healthcare and technology.

Next, we'll review the top 10 trending news of 2024 and 10 editor's picks-must-know highlights from across 10 news categories.



## Pie Chart of NYCU 2024 Proportions for Each News Category



# 01.

NYCU's Japan Visit Spurs Semiconductor Innovation



NYCU President Chi-Hung Lin led a delegation to Japan, visiting major semiconductor hubs and top universities, including the Tokyo Institute of Technology, Hokkaido University, Tohoku University, Kyushu University, and Kumamoto University. The visit strengthened Taiwan-Japan ties, resulting in MOUs with Hokkaido, Kumamoto, and Kyushu Universities and collaborative workshops on cutting-edge research opportunities.

*Kyushu University President Tatsuro Ishibashi (left) and NYCU President Chi-Hung Lin (right) signed a memorandum of understanding during a press conference on June 27.* 

# <image>

## Expanding Southeast Asia Cooperation

02.

NYCU hosted the 2024 Taiwan-Malaysia Semiconductor Forum in Kuala Lumpur, bringing together over 100 participants from academia, industry, and government to discuss semiconductor advancements and collaborations. President Chi-Hung Lin also inaugurated the Taiwan-Malaysia Overseas Science and Technology Innovation Center, signed MOUs with Pin Hwa High School in Malaysia and Hanoi University of Science (VNU-HUS), and strengthened talent exchange initiatives under Taiwan's New Southbound Policy.

**Read Full Article** 

# 03.

## Honoring Industry Visionary Sachio Semmoto

NYCU awarded an honorary doctorate to Japanese telecommunications pioneer Mr. Sachio Semmoto for his remarkable industry achievements and societal contributions. During the ceremony, a family member of an injured computer science student expressed heartfelt thanks for Mr. Semmoto's generous donation, which provided critical support. A touching video featuring the student, Classmate Liu, who suffered a brain injury, conveyed ad-



miration and gratitude through handwritten messages, leaving a profound impact on attendees.

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# 04.

# Tackling Faculty Shortages with Innovation

This article by alumnus Hung-Wen Lin highlights how NYCU addressed faculty recruitment challenges through alumni-funded scholarships. In 2023, it attracted two young professors, Ting-Jung Chang (Princeton) and Yu-Chun Yen (UIUC), back to Taiwan. This successful recruitment strengthened the College of Computer Science and set a model for other Taiwanese universities to tackle



#### talent acquisition and succession planning.





# 05.

#### **Taiwan-Japan Semiconductor Symposium Success**

Led by IAIS Dean Yuan-Chen Sun, NYCU joined the "Taiwan-Japan Semiconductor Next Generation Development Symposium" in Tokyo, engaging with SBI Holdings and top Japanese universities like Tohoku and the University of Tokyo. The event deepened Taiwan-Japan exchanges, linked R&D to industry, and highlighted IAIS's role in advancing the global semiconductor ecosystem.

# 06.



## **Breaking Technological Barriers** in Spatial Computing

NYCU and Hon Hai Research Institute (HHRI) developed a groundbreaking "Novel Depth Sensing and Facial Recognition System," combining nanophotonics with human-machine interaction sensing. Published in Nano Letters, this ultra-compact innovation could eliminate smartphone notches, enhance energy efficiency, and advance applications in facial recognition, robotics, and AR/MR. Supported by patents and national grants, it positions NYCU as a leader in Taiwan's tech industry.

# 07.

#### **NYCU Teams Shine at iGEM 2023**

At the 2023 iGEM competition in Paris, NYCU teams achieved outstanding success, with NYCU-Formosa winning a gold medal for their modular biomaterials platform powered by AI and NYCU-Taipei earning a silver medal for their "Vigila Guard" health monitoring device. These projects showcased NYCU's interdisciplinary strengths, integrating bioengineering, AI, and humanities while promoting science through education and global collaboration.



# 08.



### Harvard WorldMUN Organized by NYCU Students

NYCU students independently organized the 2024 Harvard World Model United Nations (WorldMUN) in Taipei, showcasing their leadership and initiative. Supported by NYCU's Liberal Arts College and Taipei City Government, the event promoted global youth exchanges, highlighted Taiwan's vibrant culture, and reinforced NYCU's commitment to cultivating globally-minded leaders.

# 09.

## NYCU Congratulates Tokyo Tech-TMDU Merger

NYCU visited Japan to strengthen semiconductor R&D collaborations with Japanese universities. President Chi-Hung Lin congratulated the Tokyo Institute of Technology (Tokyo Tech) and Tokyo Medical and Dental University (TMDU) on their merger to form the Institute of Science Tokyo, aiming to deepen collaboration in innovation and talent cultivation.



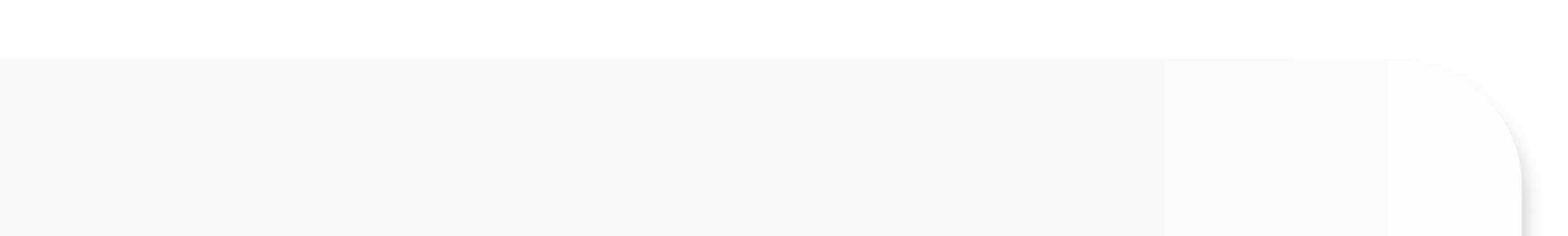
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# 10.

## Driving Digital and Sustainable Innovation

NYCU established the Data Finance Innovation Center (DFI) to drive data-centric innovation and promote technological diplomacy. President Chi-Hung Lin's delegation to Japan engaged with the Sasakawa Peace Foundation (SPF) and the National Graduate Institute for Policy Studies (GRIPS), fostering Taiwan-Japan collaborations in semiconductors, sustainability, and digital innovation, strengthening NYCU's role in global high-tech diplomacy.



# Editor's Picks



Collaboration with NICA to Address Aging Society Challenges

NYCU and the UK's National Innovation Centre for

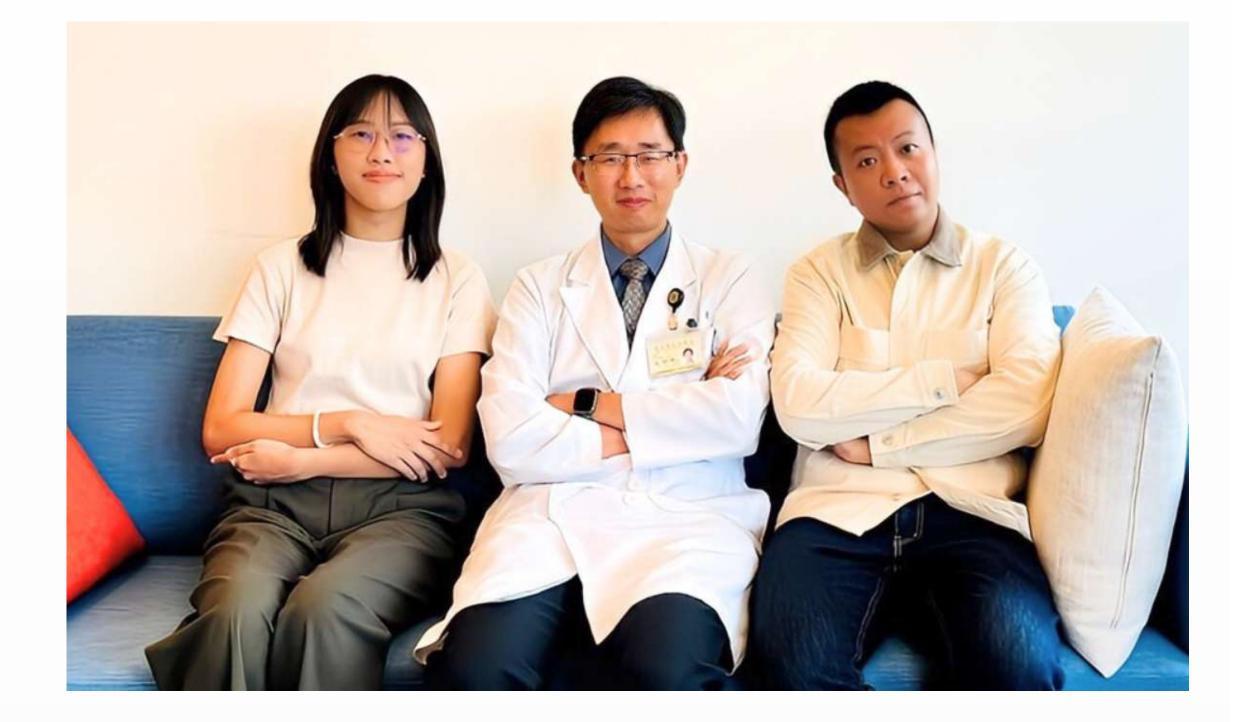
Ageing (NICA) signed an MOU to tackle aging society challenges through big data and innovative research. As Taiwan nears super-aged status by 2025, this partner-ship—NICA's first in Taiwan—aims to accelerate smart health initiatives and develop age-friendly solutions, reinforcing NYCU's leadership in health and aging sciences.

Translated by Professor Haydn Chen Edited by Chance Lai

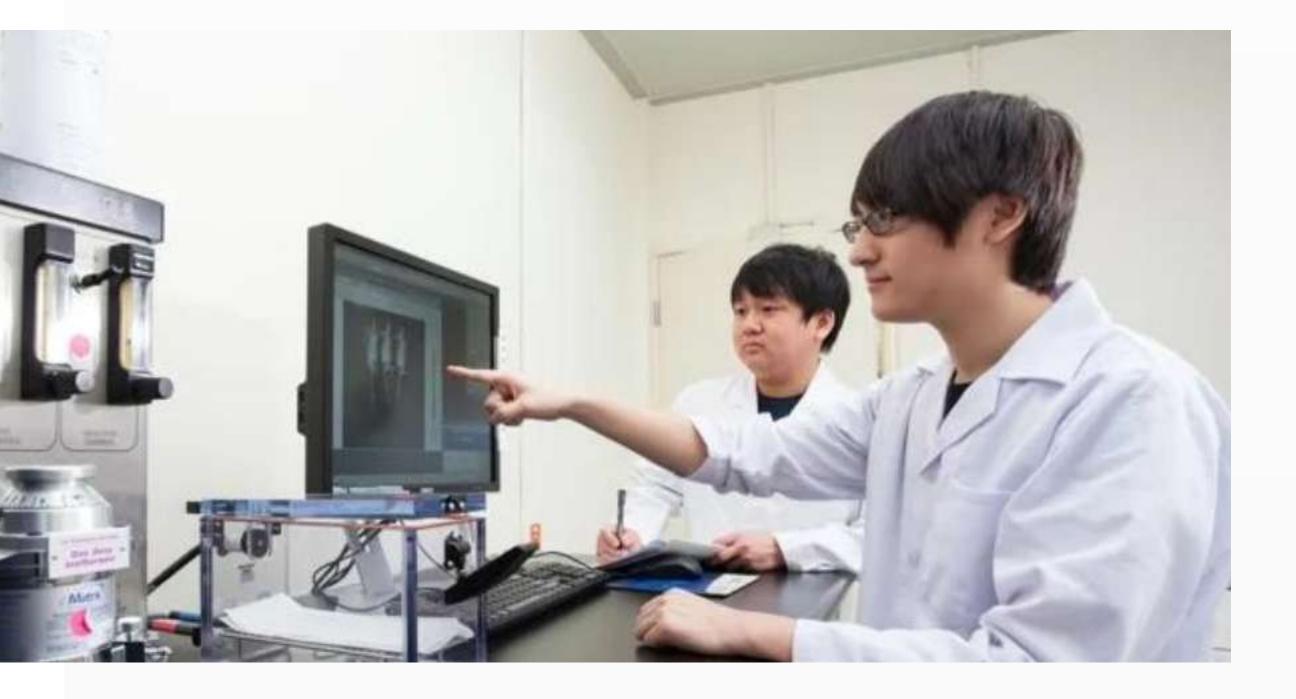
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## Mathematical Models Advance Alzheimer's Detection

Professor Albert Chih-Chieh Yang from the Department of Medicine developed a mathematical model originally designed for literary analysis, now applied to MRI scans to detect structural differences in Alzheimer's-affected brains. Published in Alzheimer's Research & Therapy, this breakthrough enhances diagnostic efficiency and holds potential for the early detection of other brain disorders, paving the way for more accurate treatments.



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NYCU is transforming its historic Bo-Ai campus into a global hub for BioICT and smart healthcare, led by the newly established College of Engineering Bioscience (CEB). Inaugurated in August 2024, CEB integrates engineering, AI, and biotechnology, advancing precision medicine, sustainable biotechnology, and translational engineering, while revitalizing Taiwan's role in life sciences and engineering.





NYCU awarded its first Honorary Doctorate in Arts to architect Kris Yao, recognizing his global contributions and integration of technology, humanity, and creativity. Known for works like the Lanyang Museum, Yao shared his philosophy of balancing utility and creativity. The ceremony highlighted NYCU's commitment to blending architecture with academic innovation and fostering collaboration between arts and sciences.



#### Bamboo Expo Showcases Sustainability

The 2024 Bamboo Expo and World Bamboo Congress, held at NYCU's Chiaotung Campus in Hsinchu, showcased bamboo's potential in crafts, architecture, and sustainability. The exhibition, themed "The Cubic of Bamboo," combined Hsinchu's historical roots as a "Bamboo City" with NYCU's innovative designs like the "Rolling Pavilion." Over 200 global experts explored sustainable applications, emphasizing bamboo's role in promoting green lifestyles and driving carbon reduction.



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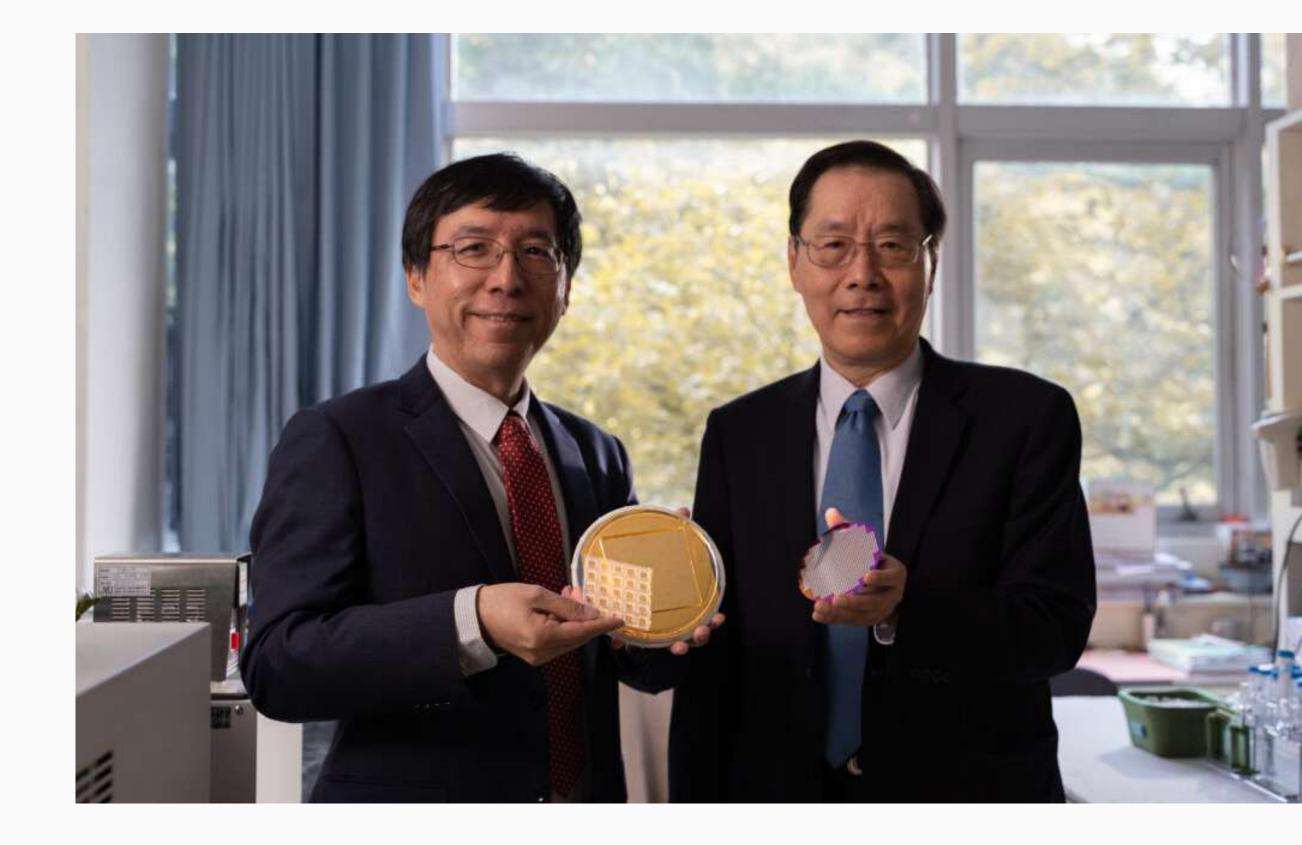
## 122 Researchers Among 2024 World's Top 2% Scientists

Stanford University's "2024 World's Top 2% Scientists" list includes 122 NYCU researchers in the "Lifetime Scientific Influence Ranking" and 89 in the "Annual Ranking," making NYCU the third most influential university in Taiwan. Dr. Liang-Kung Chen, Director of NYCU's Center for Healthy Longevity, was named Taiwan's top clinical medicine scientist for the fifth year, highlighting his global impact on aging research and community health initiatives.



## **NYCU Ambitiously Plans Global Exosome Research**

NYCU is launching a global research center to advance precision medicine using exosomes, focusing on pancreatic cancer. Led by Dr. Ly James Lee and Dr. Chi-Ying F. Huang, the project aims to use exosomes for gene therapy and early disease detection, overcoming current cancer treatment limitations. This initiative highlights the importance of addressing unmet medical needs and positions Taiwan as a leader in biomedical innovation.



#### **Read Full Article**





The NYCU Formosan Fox Rocket Team, led by Assistant Professor Zu Puayen Tan, participated in the 2024 Spaceport America Cup (SA Cup), launching a self-made 3-meter rocket to an altitude of 3,000 meters, showcasing Taiwan's advancements in aerospace technology. Established in 2020, the team has grown through interdisciplinary collaboration and international partnerships, overcoming technical and logistical challenges. Looking ahead to the 2025 competition, the team aims to drive further innovation and elevate Taiwan's presence in the

global space industry.

#### **Read Full Article**



## More Than an Architect: **Professor Shu-Chang** Kung's Design Warmth and Social Impact

Professor Shu-Chang Kung, from NYCU's Graduate Institute of Architecture, received the 2024 Golden Pin Design Honorary Award for his contributions to architecture and social practice. Known for projects like the Yilan County Government Center and humanitarian efforts, Kung blends design with societal impact. Transitioning to academia, he leads initiatives like the Humanitarian Architecture Movement and urban renewal, showcasing design as



**Graduate Institute of Architecture** 

#### a transformative force rooted in people and driven by









### Letter from the President: Identify and Solve Problems

This 12-letter series from President Chi-Hung Lin explores learning, education, and life themes. Six letters have been published, with the third, "Identify and Solve Problems," as a highlight. Reflecting on his academic and public health roles, President Lin emphasizes strategic problem-solving, citing Taiwan's first newborn hearing screening policy as an example, and echoing Einstein's view that defining problems is often more critical than solving them.



## Key Takeaways

NYCU's 2024 achievements solidify its position as a global leader in technology, sustainability, and education. Through groundbreaking innovations, strategic cross-disciplinary collaborations, and a commitment to addressing pressing societal challenges, NYCU is not just inspiring excellence—it is driving meaningful change that shapes the future of academia and industry.

For more information, visit NYCU Official Website.



NATIONAL YANG MING CHIAO TUNG UNIVERSITY



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