

## Shao-Hua Hu, Chiao-Chi Tsai, and Xiang-En Wang Win Research Creativity Awards in the NSTC Research Grant for College Student

Campus focus

The winners of the Research Creativity Award in the 2023 National Science and Technology Council (NSTC) Research Grant for College Students were recently announced, with Tamkang University's Shao-Hua Hu (Physics), Chiao-Chi Tsai (Accounting), and Xiang-En Wang (English) winning awards for their innovative research achievements. This prestigious award is given by NSTC to college students whose research results are evaluated as excellent and creative. Only 200 students are selected annually, making this a highly valued recognition of university students' innovation and research capabilities.

Shao-Hua Hu's research project was titled "Enhancing the Scalability of Noisy Intermediate-Scale Quantum Computers through Distributed Quantum Computing." He explained that this research utilized multiple quantum processors and quantum entanglement to improve the computational performance of quantum computers. His project successfully established a theoretical framework for evaluating the performance of distributed quantum computing methods, laying a solid foundation for the future development of large-scale quantum systems. His advisor, Assistant Professor Jun-Yi Wu of the Department of Physics, praised Hu's efforts and shared that the research was publicly presented at the international conference Asian Quantum Information Science (AQIS) held at Hokkaido University in Japan from August 26-30, where it earned the silver award for Best Student Poster Presentation out of 200 entries. "Having been accepted into the master's program in physics at National Tsing Hua University, Hu once told me that if he could go back to his final year in high school, he would still choose Tamkang Physics because of its incredible value!"

Chiao-Chi Tsai's research project, titled "The Relationship between Independent Directors' Dissenting Opinions and Corporate Sustainability Performance," focused on how the operation of independent directors in

corporate boards affects corporate sustainability performance (measured by E, S, G scores and total ESG scores). Her advisor, Accounting Professor Fan-Hua Kung, praised Tsai's active and diligent participation in the research program. "In addition to thoroughly researching the literature and executing the project, she also challenged herself by expanding on the project content for the final report, which she later presented at the annual accounting conference." Tsai, who has been accepted into the master's program in accounting at National Cheng Kung University, expressed gratitude to Professor Kung and Professor Yu-Shan Chang for their guidance. "Professor Kung taught me how to efficiently search for literature and analyze data, while Professor Chang helped improve my writing, making the project more professional. It felt like I was already a graduate student, writing a high-level research plan." Kung also noted that participating in the university research program helps students develop the skills necessary for graduate admissions and gives them a competitive edge. "Chiao-Chi's accomplishments serve as a great example for future students to look up to."

Xiang-En Wang's research project, titled "The Diaspora Experience and Identity in Interior Chinatown," took about a year to complete, covering topic selection, data collection, proposal writing, and conducting the research itself. She shared that through this process, she improved her research abilities and time management skills, but most importantly, she discovered her passion for academic research and developed the idea of applying for a graduate program in literature. To further explore different academic environments and research topics, Wang decided to apply for a study abroad program during her junior year and was successfully admitted to the prestigious University of Warsaw in Poland, where she began her studies in mid-September. Her advisor, Assistant Professor Ting-Hui Hsiung of the Department of English, noted that Wang's learning attitude is serious and diligent. "In class, she not only thinks about and answers the questions raised by the teacher but also seeks further discussion outside of class. She possesses the perseverance required for independent research, following up on her advisor's questions by delving into the relevant

literature. Most importantly, she can formulate questions from existing data and attempt to answer them, as demonstrated in the results of her research project.





