

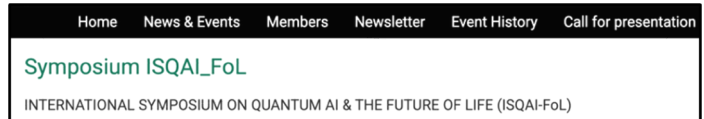


Activities

[1] 2026/6/29 – 30 (coming soon) - INTERNATIONAL SYMPOSIUM ON QUANTUM AI & THE FUTURE OF LIFE (ISQAI-FoL)

The International Symposium on Quantum AI and the Future of Life aims to create an interdisciplinary platform for thought leaders, practitioners, and researchers from diverse fields to explore the transformative potential of quantum computing and artificial intelligence (AI) in shaping the future of human well-being. This event will focus on cutting-edge applications of these groundbreaking technologies across four key domains: Biomedicine & Healthcare, Integrating Traditional Chinese Medicine and Western Medicine, Longevity and Anti-aging, and Life Optimization.

Under construction.



[2] Feb. 2026 - We successfully had a proposal accepted for the Fujitsu Quantum Simulator Challenge 2025–26 event. Click [here](#) for more information.



[3] Feb. 2026 - We recently secured approval for five Ministry of Education-funded programs in Taiwan, creating valuable learning pathways for young people. These programs support international exchange and advanced training at globally recognized universities, helping students build interdisciplinary knowledge, research skills, and global perspectives in fields such as artificial intelligence, quantum computing, biomedical science, systems medicine, and robotics.

Click [here](#) for more information.

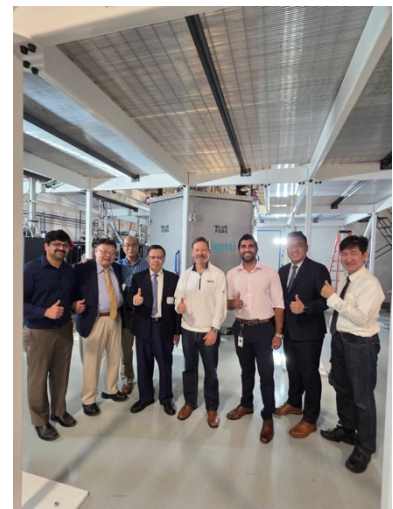
I-9-10	Ⓣ	IBM量子夢：紐約研習營	美國紐約	(九)科技網絡及數位服務	制霸IBM量子科技巔峰	115年7月13日至7月28日，共計16日(含飛行日)
I-9-11	Ⓣ	醫工量子：UCLA 菁英計畫	美國加州洛杉磯	(九)科技網絡及數位服務	探索腦科學與量子計算	115年7月6日至9月3日，共計60日(含飛行日)
I-9-12	Ⓣ	量子金融：赴美職涯領航	美國大紐約區	(九)科技網絡及數位服務	跨足量子與AI金融實務	115年7月6日至8月9日，共計35日(含飛行日)
I-9-13	Ⓣ	AI與石黑浩：探索擬真世界	日本大阪	(九)科技網絡及數位服務	台日共創人形機器人新未來	115年8月1日至116年1月15日，共計168日(含飛行日)
I-9-14	Ⓣ	勇闖WVU：太空機器人實戰	美國摩根敦	(九)科技網絡及數位服務	太空採集機器人見習	115年7月6日至7月23日，共計18日(含飛行日)

[4] **From March 16 to 19**, Asia University’s AIQRC is actively advancing its forward-looking strategy. President Jeffrey J. P. Tsai, Honorary Chairman of AIQRC (third from the right in the photo) and Chair Professor, K.T. Huang, Director of AIQRC (fifth from the right in the photo), recently led a delegation to the United States to visit quantum technology firm Rigetti Computing, where they were hosted by Vice President Mike Piech (fourth from the right in the photo). The visit marks an important step in strengthening the university’s quantum AI strategy, fostering connections with world-class technologies, and building a solid foundation for its vision of becoming an “AI University.”

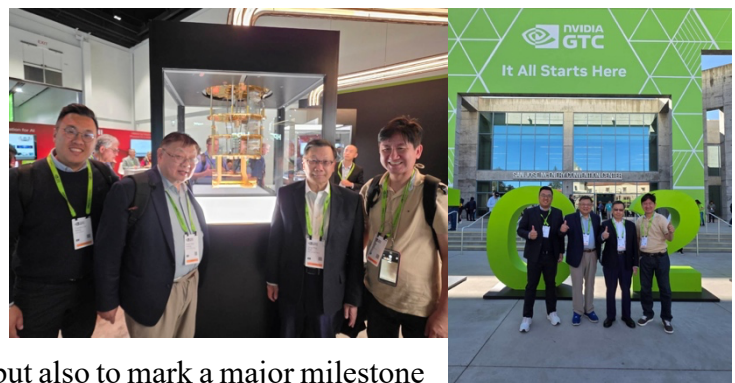


Click [here](#) for more information.

The Asia University delegation conducted an in-depth visit to Rigetti’s laboratories, inspecting hardware facilities and system architectures such as superconducting quantum computers (superconducting qubits), and gaining firsthand insight into the latest technological developments shaping the global quantum industry. President Jeffrey J. P. Tsai, Honorary Chairman of AIQRC (third from the left in the photo), Chair Professor, K.T. Huang, Director of AIQRC (second from the right in the photo) and Rigetti Computing Vice President Mike Piech (fourth from the left in the photo).



[5] **From March 16 to 19**, President Jeffrey J. P. Tsai, Honorary Chairman of AIQRC (second from the right in the photo), led teams in quantum AI, robotics, and intelligent healthcare to Silicon Valley to attend NVIDIA GTC 2026, the world’s premier annual AI conference, and engage with the global AI and semiconductor ecosystem. Tsai emphasized that the visit aimed not only to track cutting-edge technologies, but also to mark a major milestone in advancing Asia University’s AI University vision and international collaboration strategy.



Click [here](#) for more information

Overcoming Biological Complexity in Precision Medicine: The Role of Quantum Machine Learning

In the early development of medical science, knowledge was largely organized into distinct and separate disciplines, with information distributed across specialized domains. However, it is now well recognized that biological systems in both health and disease are highly complex and interconnected. This complexity often gives rise to “black box” phenomena, where underlying mechanisms remain difficult to interpret, leaving many clinical and biological questions unresolved. Within the context of precision medicine particularly in diagnostics, drug development, protein engineering, and the study of inter-system interactions this complexity presents a significant challenge [1].

Classical machine learning (ML) methods, although widely applied in biomedical research, face important limitations in this setting. In diagnostic prediction, these models often fail to preserve biologically meaningful interactions, as they rely on simplified representations of highly complex systems. Moreover, each patient exhibits a unique combination of molecular characteristics driven by intricate gene–gene interactions, protein networks, and epigenetic regulation (which are further influenced by environmental and lifestyle factors). Consequently, patients are inherently heterogeneous, particularly when viewed through multi-omics perspectives, making accurate prediction and stratification highly challenging [2]

Quantum machine learning (QML) has emerged as a potential approach to address these limitations by leveraging fundamental principles of quantum mechanics, including superposition, entanglement, and quantum parallelism [3]. These properties enable quantum systems to represent and process information in high-dimensional spaces more efficiently than classical methods. Quantum algorithms such as Variational Quantum Circuits (VQCs) [4] and quantum annealing are designed to explore complex solution landscapes and capture intrinsic correlations among variables. This makes them theoretically well-suited for tasks such as biomarker selection and drug response prediction in high-dimensional omics data.

Although the application of QML in clinical settings remains largely experimental and conceptual, its potential for future integration into diagnostic workflows is considerable. With continued advancements, this technology may contribute to transforming precision medicine by enabling more accurate, robust, and biologically informed decision-making.

[1] Nassir, N., Hashmi, M.A., Raji, K.G. *et al.* Quantum computing and the implementation of precision medicine. *npj Genom. Med.* **10**, 80 (2025). <https://doi.org/10.1038/s41525-025-00537-w>

[2] Sidak D, Schwarzerová J, Weckwerth W and Waldherr S (2022) Interpretable machine learning methods for predictions in systems biology from omics data. *Front. Mol. Biosci.* 9:926623. doi: 10.3389/fmolb.2022.926623

[3] Nadeem, Laiba & Khokhar, Ahmed & Shaikh, Maha & Syed, Farrukh & Zahid, Sumaiyah. (2026). Quantum Machine Learning: A Comprehensive Survey of Models, Challenges, and Future Directions. *Theoretical Computer Science.* 1074. 115923. 10.1016/j.tcs.2026.115923.

[4] Cerezo, M., Arrasmith, A., Babbush, R. *et al.* Variational quantum algorithms. *Nat Rev Phys* **3**, 625–644 (2021). <https://doi.org/10.1038/s42254-021-00348-9>

Edited by
Ka-Lok Ng ^{3,4}
Distinguish Professor & Deputy Director

¹Reproductive Health Center, Hualien Tzu Chi Hospital, Buddhist Tzu Chi Medical Foundation, Taiwan; ezrabw@tzuchi.com.tw

²Department of Physiotherapy, Faculty of Health Science and Technology, Binawan University, Jakarta. ezra.bwijaya@binawan.ac.id

³ [AI and Quantum Research Center \(AIQRC\)](#), Asia University, Taiwan

⁴ [Department of Bioinformatics and Medical Engineering](#), Asia University

AI and Quantum Research Center (AIQRC)

Room A110, Asia University, No. 500, LiuFeng Rd., WuFeng Dist., Taichung City 41354 Taiwan.

Email: qphys.qcomp@gmail.com Office: 04-23323456 ext. 6631

Web: <https://quantum.asia.edu.tw/>