Activities

5 Feb. 2026, INTERNATIONAL SYMPOSIUM ON HUMANOID ROBOTICS AND SOVEREIGN AI FOR FUTURE LIVING, Asia University

Asia University hosted the "International Symposium on Humanoid Robotics and Sovereign AI for Future Living" on February 5, bringing together distinguished scholars and industry leaders from Taiwan and abroad. The event served as a premier platform for examining the critical challenges involved in advancing humanoid robots from laboratory research to real-world deployment.

The symposium featured demonstrations of practical applications spanning deep-sea archaeology, hospital care, and other emerging fields. In addition, experts offered in-depth discussions on core technological issues, including chip architectures, cognitive modeling, and cybersecurity and trust frameworks. The gathering underscored the growing convergence of robotics and sovereign AI technologies, and highlighted Asia University's commitment to shaping the future of intelligent systems and their role in modern society.

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Asia University News, North America Intellectual Property News (NAIPnews), CNA

Asia University hosted the "International Symposium on Humanoid Robotics and Sovereign AI for Future Living" on the 5th, bringing together leading figures from academia and industry around the world. From the left to right: Professsor Kuan-Tsae Huang (Asia University), Edward Y Chang (Stanford University), Jeffrey JP Tsai (Asia University), Oussama Khatib (Stanford University), and Pauchen Cheng (Retired RSM, IBM Watson Research Center).

In his opening remarks, Asia University President Jeffrey J.-F. Tai highlighted the future trajectory and practical deployment of humanoid robots and sovereign AI.

Oussama Khatib, Director of the Stanford Robotics Center, emphasized that the essence of human–robot collaboration lies in extending human expertise and judgment into high-risk environments such as deep-sea missions and disaster sites. At left is Asia University Vice President Jung-Jie Huang.

At the Asia University International Symposium on Robotics: Asia University President Jeffrey J.-F. Tai (left) with Oussama Khatib, Director of the Stanford Robotics Center (right).

Asia University held the 'International Symposium on Humanoid Robots for Future Living and Sovereign AI' on the 5th, bringing together scholars from Taiwan and abroad for academic exchange and showcasing advancements in robotic applications. The symposium featured live demonstrations of a variety of real-world robotic applications, drawing considerable attention from attendees.

Secure Quantum Image-Based Steganography with Biometric Authentication

Recent advances in quantum steganography have demonstrated its potential as a secure communication paradigm that leverages fundamental principles of quantum mechanics, including superposition, entanglement, and the no-cloning theorem, to achieve imperceptible and resilient information hiding (Qu, Huang, & Zheng, 2020).

Mogos and Lam proposed a comprehensive hybrid quantum steganography framework for secure data transmission that integrates QKD, PQC, and QOTP within a unified system. Their approach addresses the critical limitations of existing quantum steganographic schemes, particularly the lack of practical integration between quantum and classical cryptographic primitives, vulnerabilities to advanced steganalysis, and the absence of post-quantum resilience. By employing the novel enhanced quantum representation (NEQR) for quantum image encoding, the framework enables the exact and deterministic embedding of secret information, making it particularly suitable for sensitive biometric data such as fingerprints. Furthermore, the use of entropy-adaptive qubit selection and key-driven positional embedding enhances imperceptibility while maintaining robustness against classical and quantum attacks, including quantum amplitude tampering and brute-force key recovery. Experimental evaluations using Qiskit simulations demonstrate that the proposed layered security architecture effectively preserves steganographic invisibility and withstands a wide range of adversarial models, highlighting its relevance as a future-proof solution for secure communication in the post-quantum era (Mogos & Lam, 2026).

References

Mogos, G., & Lam, H.-P. (2026). Quantum steganography for secure data transmission. *Cybersecurity, 9*(1), 118. doi:10.1186/s42400-025-00529-4

Qu, Z., Huang, Y., & Zheng, M. (2020). A novel coherence-based quantum steganalysis protocol. *Quantum Information Processing, 19*(10), 362. doi:10.1007/s11128-020-02868-2

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