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Published by the Future Issues and Technology (FIT) Research Cluster, RSIS. This Bulletin comes as a series of articles on science and technology from the angle of national security.

In this Bulletin

For the fourth issue of Science, Technology and Security (STS) Bulletin, we focus on quantum technologies from three key perspectives: (1) their intersection with global supply chains and international security; (2) a case study on Malaysia; and (3) setting a direction for collective success in the field. An introduction to future issues and quantum is also featured. Images below were generated by AI (imagine.art).



Future Issues and Quantum
Karryl Kim Sagun Trajano and Ysa Marie Cayabyab



Quantum Technologies, Global Supply Chain, and International Peace and Security
Dongyoun Cho



At the Horizon of Quantum: The Case of Malaysia
Clarissa Ai Ling Lee



Quantum Technologies: Charting a Course for Collective Success
Alexander Ling Euk Jin

Future Issues and Quantum | Karryl Kim Sagun Trajano and Ysa Marie Cayabyab

STS is edited by the FIT cluster and features thought pieces on key emerging technologies, such as artificial intelligence (AI), space, quantum technologies, technology geopolitics, and smart cities. We aim to explicate novel technologies in relation to policy to facilitate discussion, information sharing, and collaboration. [Click to read more.](#)

Karryl Kim Sagun Trajano is a Research Fellow at FIT. Ysa Marie Cayabyab is an Associate Research Fellow at FIT.

Quantum Technologies, Global Supply Chain, and International Peace and Security | Dongyoun Cho

This commentary explains how the intersection of quantum technologies, global supply chains, and international security is challenging the understanding and regulation of the quantum technology landscape. Without proactive policies, quantum's potential could be hindered. International frameworks must address quantum's dual-use nature and commercialisation, and a strategic, domain-specific analysis is essential to inform policy solutions. [Click to read more.](#)

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At the Horizon of Quantum: The Case of Malaysia | Clarissa Ai Ling Lee

This commentary delves into how Malaysia's policy discussions on security and science have evolved from AI to quantum technologies. While quantum technology remains less visible than nuclear technology, quantum's dual-use nature has raised security concerns. Malaysia's current safeguard regulations respond more to socio-economic-political-legal conditions, and its approach to acquiring quantum computational infrastructure relies on vendor-supplier model. [Click to read more.](#)

Clarissa Ai Ling Lee is a lecturer at Monash University Malaysia, and was previously a postdoctoral fellow at Multimedia University, Malaysia.

Quantum Technologies: Charting a Course for Collective Success | Alexander Ling Euk Jin

This commentary discusses how quantum technology is moving from an open collaborative global system towards closed-off ecosystems, thus hindering progress and increasing development costs. Likewise, the rapid advances in quantum technology are at risk due to increasing geopolitical contestation. As 2025 marks the International Year of Quantum Science and Technology, could fostering global cooperation accelerate quantum technology's benefits for humanity? [Click to read more.](#)

Alexander Ling Euk Jin is a Principal Investigator at the Centre for Quantum Technologies, and a member of the Department of Physics at the National University of Singapore. He also co-founded two quantum technology spinoffs.

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