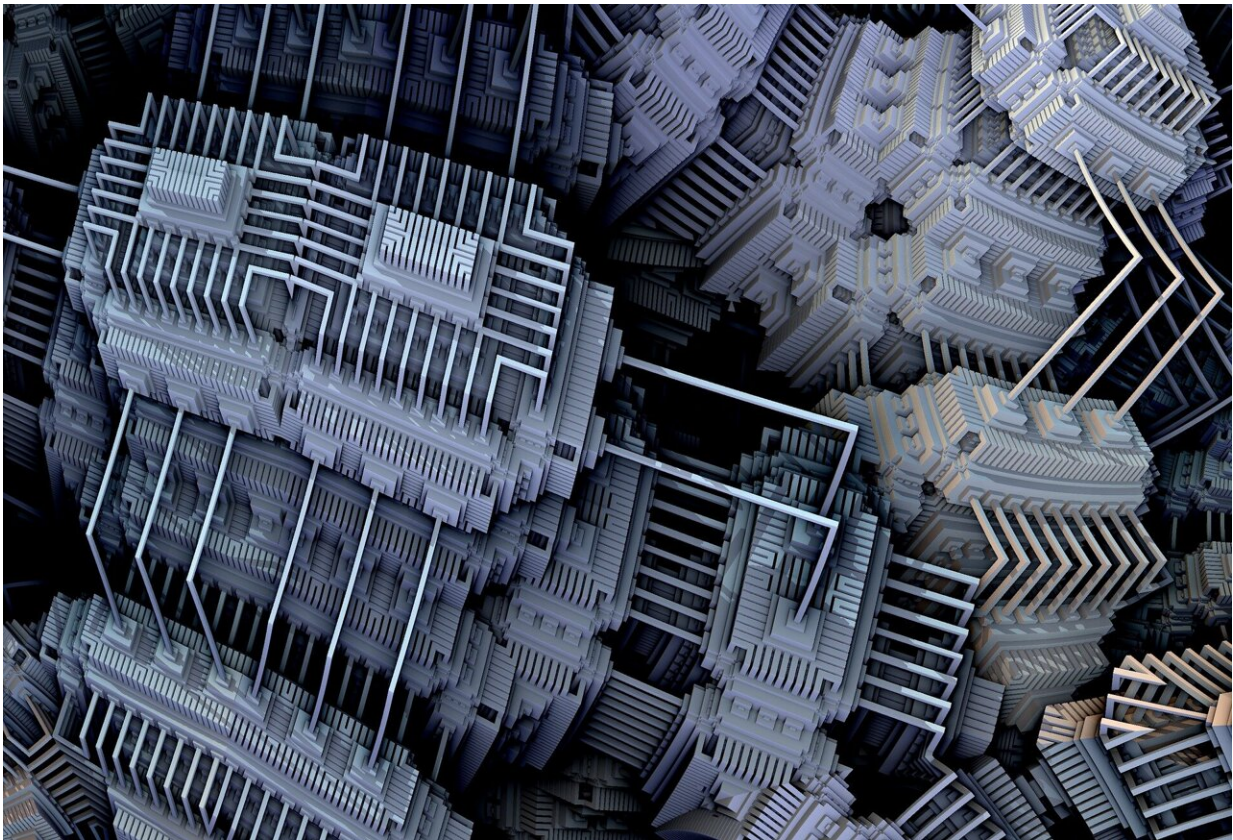


Quantum computing to spark 'cybersecurity Armageddon,' IBM says

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Governments and businesses are not prepared for the havoc quantum computers will sow in cybersecurity by the end of the decade, according to an International Business Machines Corp. executive.

"Is quantum going to really create a cybersecurity Armageddon?" Ana Paula Assis, IBM's general manager of Europe, Middle East and Africa, said on a panel at the World Economic Forum in Davos. "It's going to."

Quantum computers, an [emerging technology](#) that vastly accelerates processing power by performing calculations in parallel rather than sequentially, will make existing encryption systems obsolete. IBM has developed many of the foundational technologies for the quantum era, which Assis said could arrive by 2030.

Some governments are beginning to take the threat seriously. The U.S. Senate, in a rare unanimous vote, passed a bill in 2022 addressing the threat of quantum computers on cryptography.

Businesses are not equipped to utilize quantum machines or deal with the disruption they will cause, SandboxAQ Chief Executive Officer Jack Hidary said on the panel.

Most "companies do not have a robust roadmap yet as to how they're going to use AI and quantum together to solve core problems," Hidary said.

He said a "trainwreck" is unfolding, estimating that it will take banks eight to 10 years to transfer to post-quantum protocols, while scalable quantum computers will be available by 2029 or 2030. Anything that uses encryption, from ecommerce to [online banking](#), is at risk, according to Hidary.

Other details from the panel:

- China is making "a very serious and very confident effort along many lines" in [quantum computing](#), ETH Zurich President Joel Mesot said.

- States may be better able to regulate quantum computers than [artificial intelligence](#), because the technology is so dependent on infrastructure, according to Mesot. "I would be more optimistic that we can regulate this in a better way than AI," he said.
- Quantum computing is developing faster than projected, Hiday said.
- Two-thirds of developers using quantum computers rely on IBM's open-source toolkit Qiskit to write their code, according to Assis.

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