

Swiss quantum physicist joins Calgary university to work on Internet security

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An internationally-renowned quantum physicist has joined forces with an Alberta university in the hopes of making Internet hacking a thing of the past.

Wolfgang Tittel, recruited from the University of Geneva by the University of Calgary's Institute for Quantum Information Science, will work with researchers to develop secure quantum encryption technology.

"There are only a few groups in the world doing information security research as broad as the University of Calgary group," Tittel said.

He said quantum encryption technology holds great promise for information security because the security codes are carried in bundles with a particular configuration.

If these bundles are disrupted during transmission, they re-configure and the information immediately scrambles, he said.

This differs from current encryption technologies, which are only capable of scrambling information for short periods of time.

"We can guarantee the security. Nothing we have now is like this," said Tittel, who will also work as a physics professor.

The technology could someday provide uncompromised online protection for everything from Internet banking to medical records.