JOHNSON SHOYAMA Centre for the Study of Science and Innovation Policy

## CSIP INNOVATION FORUM

Science, technology and innovation policy is essential in shaping our future. Translating the narrative into clear options, strategies and outcomes is necessary, but far from simple.

**Thursday, February 11** 12:00 - 1:00 p.m. (CST)

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## Schrodinger's Policy Agenda: Where Do Quantum Computers and other Futuristic Threats Belong?

## PRESENTED BY: Ryan Deschamps, Postdoctoral Scholar, University of Waterloo

Under uncertainty, policy problems find themselves in a "quantum state" where assessing risk requires the resolution of several hypothetical scenarios. Quantum cybersecurity is one such example. Scientists have already confirmed that a "supreme" quantum computer

could easily undermine the cryptography that is widely used by most computer servers and the World Wide Web. If a malicious state or criminal actor could access such a computer, they could use it to compromise a nation's critical infrastructure such as the energy grid or airport systems and cause injury or death to citizens. It is also possible that industry and other actors can over-respond and waste resources that can be applied to other concerns. This presentation will provide a layperson's overview of the "Quantum threat" and other hypothetical cybersecurity scenarios, arguing that a policy design is the most effective approach to managing evidence-confirmed but uncertain policy concerns.

**Ryan Deschamps** is a postdoctoral scholar at the University of Waterloo with a background in cybersecurity, digital governance and information policy

The Centre for the Study of Science and Innovation Policy (CSIP) invites all students, faculty, researchers, and citizens interested in the study of science, technology and innovation policy to participate in a bi-weekly forum.

