



University
of Victoria

Lansdowne Lecture

The University of Victoria's Public Lecture Series features the words and work of distinguished men and women, across a vast array of academic and research endeavours. As host of this lecture series, UVic continues its mission of enriching the human mind and heart.



Professor Raymond Laflamme

**Canada Research Chair in Quantum Information
Executive Director, Institute for Quantum Computing
University of Waterloo**

Quantum Information Science

6pm, Monday, March 2, 2015

Bob Wright Building Room B150

Presented by the Department of Physics and Astronomy

We are at the dawn of a new technological revolution. Just as the 19th century was the Machine Age and the 20th century was the Information Age, the 21st century promises to go down as the Quantum Age. Harnessing and controlling the counter-intuitive properties of quantum mechanics will enable previously unimaginable technologies that will transform the ways we work, communicate and live. Quantum information processing forces us to learn a new language — one that describes the behaviours and interactions of the universe's most fundamental building blocks. We are now learning to speak this quantum language — to control quantum systems and apply them toward unprecedented applications in the laboratory and beyond. Quantum technologies are already finding real-world applications, and the groundwork is now being laid for revolutionary advances in the coming years, from ultra-powerful computers to unbreakable cryptography and more. Professor Raymond Laflamme will describe some of the recent progress in the field, such as the experimental implementation of algorithms on small quantum processors, the development of quantum communication applied to cryptography, and he will explore some of the unexpected offshoots of quantum information research, such as advances in neutron interferometry and oil exploration.

Travel Green: UVic is accessible by many modes of sustainable transportation including Regional Transit, cycling, walking and taxi. Should you choose to drive, pay parking is in effect for a \$2.50 evening rate.

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