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Quantum Sensing Platforms for Real-World Applications

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Quantum sensors leverage the unique quantum mechanical properties of light and matter to achieve unprecedented levels of sensitivity and accuracy in measurements of a wide variety of physical quantities. Several different technological platforms of quantum sensors are now commercially available and have applications across diverse industries including healthcare, environmental monitoring, navigation, and defence. The integration of quantum sensors into real-world commercial systems presents both technical challenges and promising opportunities for enhanced performance. In this talk, I will present some key quantum sensing platforms, their core operating principles, and highlight their advantages over classical sensing technologies. I will also discuss ongoing efforts in Canada and abroad to commercialize these technologies and make them more accessible to non-experts.

Keyword-1

Keyword-2

Keyword-3

Presenter: BARRETT, Brynle (UNB)

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