

Department of Physics Colloquium

Speaker: Dr. Manqoba Hlatshwayo

Quantum Applications Engineer
National Quantum Computing Centre (UK)

“The Quantum Computing Promise”

Open to the public, free of charge

Monday, March 11, 2024 - 4 p.m. – 1110 Rood Hall

Refreshments: 3:30-3:50 p.m., Bradley Commons, 2202 Everett Tower

Abstract: The field of quantum computing has attracted a lot of attention and investment due to its promise to substantially speed up complex calculations, especially for problems that are deemed intractable for classical computers. This talk is a brief status update on how far along the field has advanced towards realizing that promise. It will cover recent advances in quantum hardware development, quantum algorithms, and applications. It will also include a discussion of selected open problems and opportunities for students and researchers. Finally, we will discuss WMU’s research efforts in applications of quantum algorithms in nuclear physics, in particular our recent work [1,2].

[1] JF. Novak, MQ. Hlatshwayo, E. Litvinova, “Response of strongly coupled fermions on classical and quantum computers,” *in preparation* (2024)

[2] MQ. Hlatshwayo, JF. Novak, E. Litvinova, “Quantum benefit of the quantum equation of motion for the strongly coupled many-body problem,” *Phys. Rev. C* **109**, 014306 (2024).

Parking: Metered parking is available in Parking Structure #2, near Miller Auditorium.

More information: (269) 387-4941 [Department of Physics email](#) [Campus map](#)

