

SEMINAR NOTICE

Department of Physics and Engineering Physics
University of Saskatchewan

SPEAKER: Bardia H. Fahim, PhD candidate,
Physics and Engineering Physics

TOPIC: *Modified Theories of Gravity*

DATE: Tuesday September 17th, 2024

TIME: 3:30-4:30 p.m.

PLACE: *Physics 103*

Abstract:

Gravity is one of the four fundamental forces, which is crucial in shaping the universe and governing the dynamics of matter and energy. Einstein's general relativity theory has been the foundation of our understanding of gravity, providing insights into spacetime and cosmic evolution. However, general relativity faces significant inconsistencies such as the prediction of singularities, the unexplained nature of dark matter and dark energy, and the challenges in unifying gravity with quantum mechanics.

Quantum Gravity aims to resolve these inconsistencies by reconciling general relativity with the principles of quantum mechanics, offering a framework that would better describe the behavior of the universe in extreme conditions such as black holes and the early universe. The pursuit of Quantum Gravity highlights the need for modified theories of gravity that can address the limitation. This presentation explores the shortcoming of general relativity and the necessity of alternative theories, such as scalar tensor gravity and teleparallel gravity.