SEMINAR NOTICE

Department of Physics and Engineering Physics
University of Saskatchewan

SPEAKER: Dr. Rainer Dick
Physics & Engineering Physics

TOPIC*:* ***String theory, antisymmetric tensor fields, and dark matter***

DATE: Tuesday February 8th, 2022

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

PLACE: ***Physics 103***

ABSTRACT:

String theory is a theoretically motivated model for high-energy physics beyond the Standard Model of particle physics. However, it has remained elusive from the experimental perspective, although there are several possible signatures of string theory in the framework of low-scale string theory. In particular, both extra dimensions and antisymmetric tensor fields are unique predictions from string theory which can potentially affect physics below the TeV scale. On the other hand, the major contemporary challenge for particle physics is to pin down the physical properties of dark matter particles: their masses, spins, and couplings. The talk will provide brief introductions to the Standard Model, string theory and dark matter, and then discuss possible signatures of antisymmetric tensor fields in experimental particle physics and dark matter searches.