



University
of Victoria

PHYSICS AND ASTRONOMY COLLOQUIUM (In Person & Online)

Dr. Alan McConnachie
NRC

**“Direct observations of the hierarchical formation of our
Milky Way galaxy (Or, On the shoulders of dwarfs)”**

Abstract

“2024 will be the 30th anniversary of the discovery of the Sagittarius dwarf galaxy, the prototype and nonpareil of a galaxy in the process of being consumed by our Milky Way. It remains the most striking evidence for the ongoing hierarchical formation of galaxies in our own cosmic backyard. Since that time, it has become abundantly clear that our knowledge, let alone understanding, of the structure of our home galaxy is woefully incomplete, and large area imaging surveys in the years since have resulted in the discovery of many more dwarf galaxies and stellar systems in various states of destruction. These discoveries, coupled to an improved theoretical understanding of the formation of galaxies, has put the focus of much of modern cosmology on dwarf galaxies. Their dynamical analysis may provide insight into the properties of the lowest mass dark matter halos, and their chemical study may reveal signatures of the first stars in the Universe. Here, I will discuss latest results on these core science topics from a multi-faceted observational program, that is using photometry from the deepest and widest optical northern sky survey in existence, astrometric data from the revolutionary Gaia space satellite, and precision spectroscopy from the newest and most sensitive spectrograph available to the international community, GHOST at the Gemini South Observatory.”

Wednesday, October 5, 2022

3:30 p.m. PDT

Bob Wright Centre B150

Zoom link available on Uvic Event Calendar