THE UNIVERSITY OF BRITISH COLUMBIA

Symposium Seminar Series
I. K. Barber Faculty of Science, UBC Okanagan
present

Dr Kristine Spekkens
Queen's University; Canadian Science Director, Square Kilometre Array

Monday October 28, 2024, 4:00 PM-5:00 PM
in SCI 247; zoom

Title: Gas Rich Galaxies and Cosmology: Paving the Way to the SKA

Abstract
The atomic gas (HI) content of nearby galaxies provides important insight into how they form and evolve within the standard cosmology, which describes the structure and evolution of the universe itself. In this talk, I will highlight some of my group's recent efforts to build statistical samples of HI disks to use as cosmological probes. I will first describe ongoing tensions between the structure of disk galaxies inferred from their rotation curves and predictions from cosmological simulations of galaxy assembly. I will then describe how the WALLABY widefield HI survey, now underway on the Australian SKA Pathfinder (ASKAP) will deliver population statistics to address these issues, and our progress on that front so far. This work paves the way for probing HI disks across cosmic time using the SKA telescope -- an international mega-science project in which Canada is now a member -- when it comes online towards the end of this decade.

Biography
https://en.wikipedia.org/wiki/Kristine_Spekkens

Coffee and refreshments will be provided at 3:45.

Everyone is welcome to enjoy the talk and coffee & cookies
If you have any questions, please email
alex.hill@ubc.ca