Tuesday, February 1st, 2022, 2:30pm

Speaker: Cemile Marsan

Institution: York University

Title: Hunting Monster Galaxies in an Infant Universe

Abstract:

Over the last decade, several deep near-infrared (NIR) surveys have mapped the existence of massive, evolved galaxies out to z~4, merely ~1.5 Gyrs after the Big Bang. The surprising discovery of these "monsters" at early cosmic epochs serves as a critical test for theoretical models of galaxy formation and evolution to reproduce, placing constraints on the processes driving their rapid growth and the role of feedback in the early universe.

In this talk, I will present the census of a mass-complete sample of galaxies at $3 < z < 6$ with $\log(M_*/M_\odot) > 11$ identified over the COSMOS/UltraVISTA ultra-deep field stripes, and discuss recent spectroscopic campaigns confirming the existence of these "monsters" out to z~4.

I will conclude with open questions and how follow-up data (with current and future observatories) will return key information to understand the physical conditions responsible for the earliest formed massive galaxies.