



University  
of Victoria

# PHYSICS AND ASTRONOMY COLLOQUIUM (Online)

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**“First Insights from JWST: Star Formation in Cosmic-Dawn Galaxies”**

## Abstract

“After successful deployment and commissioning, JWST has now been delivering data for over a year. I will give an overview of the first-year surprises and discoveries, zooming in on some of the earliest galaxies and presenting new results on the spatially resolved growth histories of high-redshift galaxies. Specifically, I will discuss the structural and stellar population properties of the galaxies at the redshift frontier, with redshifts  $z > 10$ . I will then connect the mode of star formation with the early enrichment of galaxies: for galaxies where we have constraints on the gas-phase metallicity (at redshift of  $z=8$ ), I will show how star-bursting galaxies can have different gas-phase metallicities due to internal and external mechanisms that drive the starburst. Finally, I will focus on the structural evolution of galaxies, presenting how dense stellar cores form within galaxies at  $z > 7$ . I will wrap up by highlighting what JWST will be able to deliver regarding high-redshift galaxy evolution in the upcoming years.”

Wednesday, September 27<sup>th</sup>, 2023

3:30 p.m. PST

Zoom link available on Uvic Event Calendar