

Department of Physics and Astronomy Colloquium Series

Tuesday, September 22, 2026, 2:30pm in PSE 317

Speaker: Jeremy Webb

Institution: York University

Title: The Tales that Tidal Tails Tell

Abstract: Stars form in clustered environments that either break up soon after formation or continue to evolve as star clusters. The natural end product of a star cluster's evolution is complete dissolution, as internal and external processes work to continuously strip stars from the cluster. Once a star escapes its host cluster, it populates one of two thin tidal tails that precede and succeed the cluster along its orbit. Once the cluster itself dissolves, all that is left is a stellar stream. Tails and streams have been shown to be quite sensitive to the evolution and present day structure of their host galaxy, such that significant work goes into modelling and observationally searching for tails and streams. The internal properties of tails also contain significant information about their progenitor cluster and provide insights into the Milky Way's current stellar population. During this colloquium, we will explore modelling stellar stream formation and evolution, studying multiple populations within these systems, and estimating the distribution of exoplanetary systems and Oort clouds along tails and streams.