

# Understanding Star Formation in Nearby Galaxies

## PROJECT DESCRIPTION

All stars form out of clouds of molecular gas. In this project, we will study how the properties of those clouds regulate the process of star formation. Modern theories of star formation argue that star formation is regulated by the properties of turbulent flows. This has been shown to be consistent with observations using simple measurements, but my research group has developed several new statistical tools for measuring resolved properties of turbulence. We will use data from new surveys of molecular gas properties in the Milky Way and nearby galaxies. We will use the new tools developed by my group to make quantitative measurements of how the properties of turbulence in clouds regulate the local star formation rate. Students will learn about the physics of turbulent flow and its role in star formation regulation. The project will involve programming in Python, working with large data sets to perform statistical analyses, and writing a report about the results.

## FACULTY-DEPARTMENT

Science - Physics

## DESIRED FIELD OF (STUDENT) STUDY

3rd year in physics, astronomy. Some background in computer programming, statistics or image processing is an asset.

## INTERNSHIP LOCATION

University of Alberta Main Campus - Edmonton

## NUMBER OF INTERNSHIP POSITIONS

2

## INTERNSHIP START DATE

July 3, 2018

## INTERNSHIP END DATE

September 30, 2018

Contact: Brendan Cavanagh, Internship Coordinator (Inbound)  
University of Alberta International  
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## ARE THE DATES FLEXIBLE?

Yes, I am flexible regarding the internship dates. Selected students can contact me to request a date change.