

# introduction copy

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## 1. Introduction

Star clusters are groupings of stars that are born coevally out of a common molecular gas distribution. Long-lived star clusters that remain gravitationally bound for hundreds of millions of years or more are valuable astrophysical laboratories, improving our understanding in many fields of astronomical research, including star formation. In this dissertation, I describe my research studying cluster formation and its link to star formation behavior in the Andromeda galaxy (M31). Here I introduce the scientific questions that drive this observational investigation, and discuss how my work fits in the larger context of M31 studies and extragalactic cluster studies.

### 1.1. Clusters as Tracers of Star Formation

The strong link between star formation and star clusters is seen from the fact that a majority of star formation occurs in spatially-correlated stellar groupings. The seminal review from presents the often-quoted result that 70-90% of stars form in embedded clusters, based on infrared observations of star forming regions in the Solar