



Matthew Bates

Cardiff University

Research area: Star Formation

Project title:

Statistical Descriptors of Star Clusters in the ISM

About me:

My name is Matthew Bates. I am a first year PhD student working in the Department of Physics and Astronomy as part of the Star Formation Research Group.

I completed an MPhys in Physics and Astronomy at the University of Kent, and also spent a year abroad at UC Berkeley during my third year there.

I work on parametrising the structure of Molecular Clouds and Star Clusters using Machine Learning techniques. I aim to compare contemporary methods used to describe this structure with modern Machine Learning algorithms such as Artificial Neural Networks.

Science/research area:

My main interest is to look at the structure of Molecular Clouds and Star Clusters, to determine new methods for parametrising this structure, and to investigate the link between Molecular Clouds and Star Clusters

Data Intensive Research Skills and Interests:

I use Imaging Data of Artificial Molecular Clouds and Star Clusters to train Neural Networks in order to predict the structural properties of Astronomical Molecular Clouds and Star Clusters.