**Papers Pauline Suggested**

8D Mid-IR/Optical Bayesian Quasar Selection

Multi-wavelength selection of quasars from MIR + optical data. Use of Bayesian classification and a series of color-color cuts to identify type 1 quasars.

*References:*

~~Lacy et al. (2008)~~ & Stern et al. (2005) – color cuts applied to quasars to classify in relatively bright MIR sources

* ~~Lucy et al. (2004a) – color cuts in nonadjacent bandpasses to isolate AGNS~~
* Stern et al. (2007, 2005) – color cuts in adjacent bandpasses

Donley et al. (2008) – AGN selection techniques in MIR

~~Stoughton et al. (2002) – extended vs. point like classification by comparing psf magnitudes and extended flux in detected bands~~

Richards et al. (2004) – Bayesian selection techniques

Hastie et al. (2001), Richards et al. (2004), Ball et al. (2006), Gao et al. (2008) – creating training sets from the data set

~~Gray et al. (2005) – classification based on color consistency with training set~~

Towards automatic classification of all WISE objects

Applying support vector machines with a cross-referenced training set to identify stars, galaxies, and quasars in WISE.

*References*

~~Jarrett et al. (2011) – colour-colour diagrams of WISE~~

~~Solarz et al (2012)~~ & Malek et al. (2013) – SVM applied to other surveys for similar task

~~Shawe-Taylor & Cristianini (2004) – SVM and kernel algorithms (BOOK)~~

~~Beaumont et al. (2011) – SVM to classify ISM structures~~

Bu et al. (2014) – SVM distinguishing different subclasses of spectral type stars

Saglia et al. (2012), Kovacs & Szapudi (2015) – SVM to classify stars quasars and galaxies

Clustering-based redshift estimation: comparison to spectroscopic redshifts

*References*

~~Menard et al – clustering-based redshift estimation method~~

The meaning of WISE colours – 1. The Galaxy and its satellites

Colour-colour and colour-magnitude criteria to select AGB stars and separate them into different classes. Different colour-colour cuts to identify objects.

*References*

~~Wright et al. (2010) – Vega magnitude system~~

~~Ivezic & Elitzur (2000) – IRAS-based CC diagrams~~

~~Ivezic, Beers & Juric (2012) – main sequence star identification in WISE survey~~

~~Van der Veen & Habing (1988) – clustering in IRAS cc diagrams~~

Cioni & Habing (2003) – DENIS survey and classification of AGB stars (short wavelengths)

Zijlstra et al. (2006) – LMC long wavelength object classification

CLaSPS: a new methodology for knowledge extraction from complex astronomical data sets

Clustering-Labels-Score Pattern Spotter determines correlations among astronomical observables in data using unsupervised clustering techniques.

*References*

~~D’Abrusco et al. (2009) – using labels to classify photometric data of quasars~~

Gosh & Acharya (2011) – Consensus clustering

Hastle et al. (2009) – clustering methods

Fraix-Burnet et al. (2012) – clustering galactic observations

Lloyd (1957) – K-means algorithm

Kohonen (1990) / Vesanto & Alhoniemi (2000) – Self Organizing Maps

Geach (2012) – classification of extragalactic sources from large surveys using photometric attributes

Bazarghan (2012) – spectral classification of stars

Hartigan (1975) – Principal component analysis

The effect of spatial resolution on optical and near-IR studies of stellar clusters

Investigate how colours are affected by the aperture size used. NIR is heavily affected by resolution when apertures are large. Optical colours are much less affected.

*References*

Gazak et al. (2013) – J- and H- band imaging of M83

Westmoquette et al. (2014) – Looking for RSG in M83

Silva-Villa et al. (2014) – cluster catalogue of M83

~~Adamo et al. (2010a) – Ages mass and extinction estimates in different bands of M83 objects~~

Schirmer (2013) & Erben et al. (2005) – data reduction techniques