

**EyeTN workshop****March 30 - April 1 2015****Clustering and Visualisation of expression data using Mayday**

During the following practical session you will learn how you can cluster either the experiments or the genes in Mayday and then visualise the results of clustering.

**1. Filtering in Mayday**

We will introduce the concept of the 'dynamic probe list' of Mayday, a powerful concept to filter expression data.

**2. Clustering in Mayday****a) Clustering of the Experiments**

- Before you perform a hierarchical clustering of the experiments, ask yourself what do you expect to see.
- Perform the clustering.
- Does the result match your expectation?
- Repeat all steps by choosing a different distance / clustering algorithm. How do you compare the different clusterings?

**b) Clustering of the Genes**

- Before you perform a partitioning clustering of the genes, ask yourself what do you expect to see.
- Perform the clustering.
- Does the result match your expectation?
- Repeat all steps by choosing a different distance / clustering algorithm. How do you compare the different clusterings?

**3. Visualization in Mayday**

- Heatmaps  
Next visualise the results of the clusterings of 1a) (and 1b) using a heat map in conjunction with a dendrogram.
- Profile Plots  
Next visualise the results of the clusterings of 1b using profile plots.
- Silhouette Plots Next visualise the results of the clusterings of 1b using a silhouette plot: which clustering that you produced was the best one?