MATH590: Data clustering

1 Centroid methods

Import data corresponding to gait

```
In[2]:= SetDirectory["/home/student/courses/MATH590/SETdata"];
        c=Import["coefs.data","Table"]; {nSteps,nd}=Dimensions[c]
```

$\{298, 2\}$

```
In[3]:= c[[1;;4,1;;2]]
```

$$\begin{pmatrix} -0.31621 & -4.52238 \\ -5.62919 & -2.08116 \\ 0.50384 & -1.45805 \\ 0.340489 & -2.78363 \end{pmatrix}$$

```
In[4]:= options = {
          CriterionFunction->"StandardDeviation",
          DistanceFunction->EuclideanDistance,
          Method->"NeighborhoodContraction"
        };
        cGroups=FindClusters[c,options];
        cGroupsPlot = ListPlot[cGroups];
        Export["cClusters1.png",cGroupsPlot];
        Length[cGroups]
```

5

```
In[5]:=
```

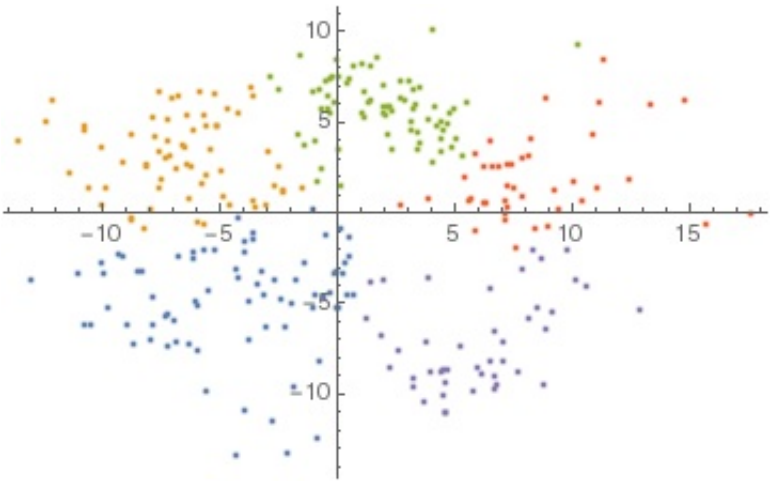

Figure 1. Classification of steps into clusters