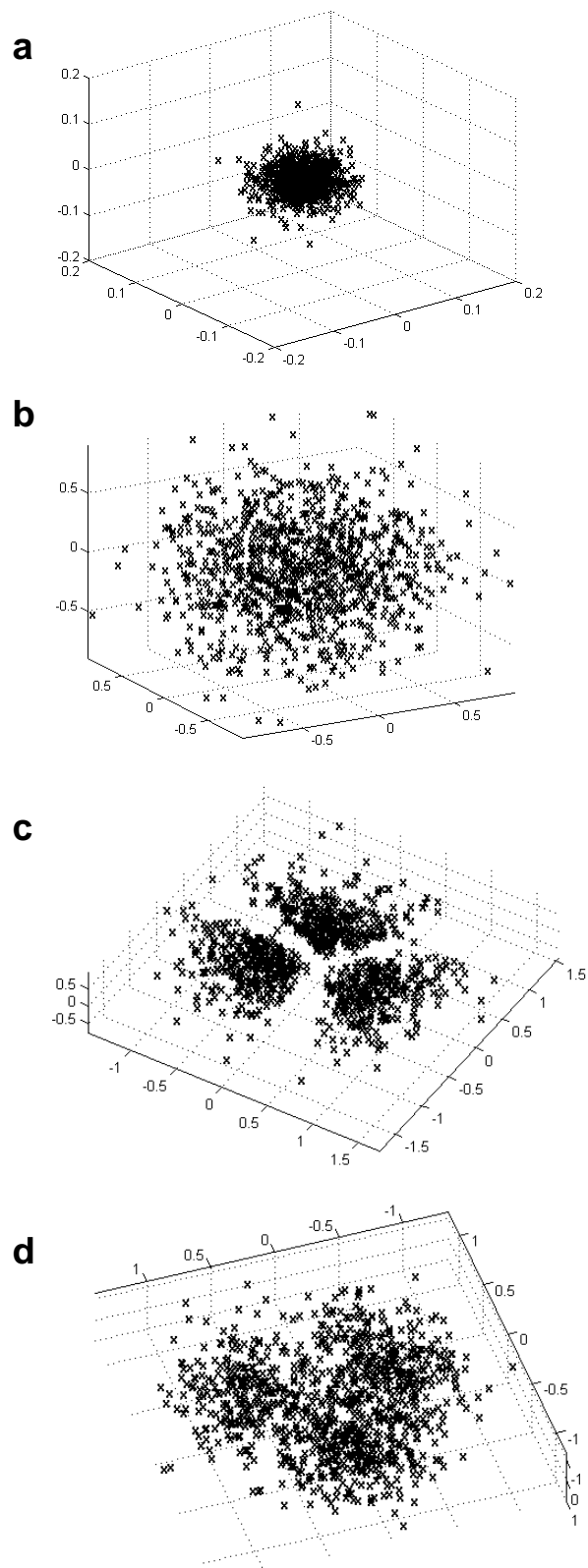


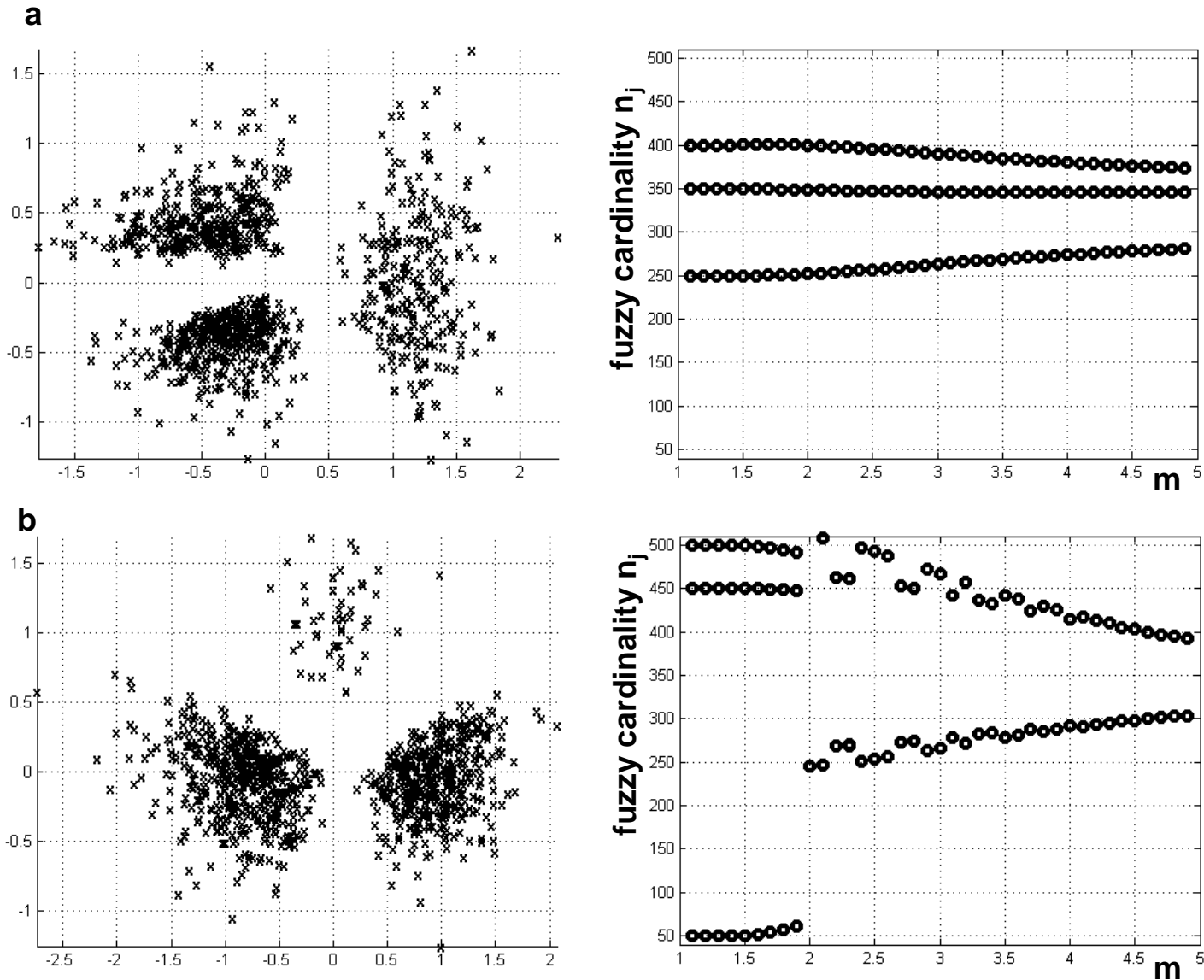
Supplementary Figure 1:

(left) similarity measure (D) as a function of the cross-correlation coefficient (CC_{ij}) using Equation (4) (dashed line) and the new formula in Equation (5) (solid line). (right) zoom in two parts of the plot (top: negative correlation; bottom: positive correlation).



Supplementary Figure 2:

MDS 3D-plots of the simulated data: the 1-cluster dataset (a), the n-cluster dataset (b), the 3-cluster dataset with low ($\sigma=1$) noise levels (c), and the 3-cluster dataset with high ($\sigma=4$) noise levels (D).



Supplementary Figure 3:

illustrates the influence of the fuzziness degree m . (a) a well-balanced dataset with 3 clusters: MDS 2D-plot of all datapoints (left) and the fuzzy cardinality of each obtained cluster at different m values (right). (b) a 3-cluster dataset with 2 dominant clusters: MDS 2D-plot of all datapoints (left) showing a cluster with small number of datapoints (less than 5% of the whole dataset), and the fuzzy cardinality of the three identified clusters at different m values (right). In (a), FCM was able to identify the three clusters at different m values, whereas in (b) the smaller cluster was not identified by FCM at higher m values (e.g. $m > 3$).