

| Objects Dataset | Features | Clusters | 5% CS | | | | | | COPKM | LCC | CSC | DILS | KMEANS |
|--------------------|----------|----------|-----------|--------------|-----------|--------------|------------|--------------|-------------|-----------|-----------|-----------|-----------|
| | | | PCCC-N2-S | PCCC-N3-S | PCCC-N4-S | PCCC-N5-S | PCCC-N6-S | PCCC-N2-S-RD | | | | | |
| Banana | 5,300 | 2 | 2 | 0.3 | 0.3 | 0.2 | 0.2 | 0.3 | 0.3 | — | — | 4,386.9 | 4,283.3 |
| Letter | 20,000 | 16 | 26 | 127.5 | 484.1 | 318.6 | 345.1 | 758.0 | 640.3 | — | — | — | 4,109.1 |
| Shuttle | 57,999 | 9 | 7 | 24.2 | 25.3 | 23.5 | 24.8 | 25.2 | 25.9 | — | — | — | — |
| CIFAR10 | 10,000 | 3,072 | 10 | 22.1 | 23.5 | 68.9 | 71.2 | 99.1 | 22.3 | — | — | — | — |
| CIFAR100 | 100,000 | 3,072 | 100 | 715.6 | 800.5 | 646.9 | 664.9 | 1,171.0 | 2,893.6 | — | — | — | — |
| MNIST | 70,000 | 784 | 10 | 28.0 | 28.0 | 28.1 | 36.5 | 92.5 | 27.4 | — | — | — | — |
| Sum | | | | 917.6 | 1,361.7 | 1,086.2 | 1,142.8 | 2,146.0 | 3,609.8 | 21,600.0* | 21,600.0* | 22,386.9* | 22,792.4* |

*Nan values (—) are replaced with 3,600 before computing the sum.

Table W119: Average running times (in seconds) of the versions of the PCCC algorithm and the four state-of-the-art algorithms (COPKM, CSC, DILS, LCC) for the constraint sets of size 5% CS. Higher values indicate better separated clusters. The lowest values are stated in bold. The column KMEANS reports the average running time of the unconstrained k-means algorithm. The hyphen indicates that the respective algorithm returned no solution within the time limit of 1,800 seconds.