

Dataset	20% CS					
	PCCC	PCCC-N2-S-RD	COPKM	CSC	DILS	LCC
n1000-k10	2.2	0.8	55.7	24.4	3,659.6	2,649.5
n1000-k100	310.4	15.9	80.2	28.4	3,655.6	1,585.6
n1000-k2	0.2	0.2	956.0	27.6	3,691.6	–
n1000-k20	25.5	18.6	–	24.2	3,646.8	3,670.0
n1000-k5	0.2	0.2	252.6	25.4	3,696.6	44.8
n1000-k50	397.4	49.8	–	27.1	3,671.4	1,929.3
n2000-k10	1.0	0.9	1,207.8	252.8	3,839.2	3,073.3
n2000-k100	1,410.4	63.8	168.7	248.8	3,696.2	3,666.4
n2000-k2	0.7	0.7	–	264.8	3,941.0	–
n2000-k20	11.9	9.4	288.6	250.9	3,768.9	4,291.7
n2000-k5	0.6	0.7	4,395.5	260.7	3,877.4	–
n2000-k50	419.5	156.4	–	255.3	3,715.4	3,875.9
n5000-k10	3.5	3.4	–	2,926.3	4,733.6	–
n5000-k100	1,628.9	411.3	–	2,649.0	4,514.9	–
n5000-k2	3.9	3.8	–	2,981.8	5,503.9	–
n5000-k20	4.1	4.8	–	2,752.5	4,511.0	–
n5000-k5	3.4	3.6	–	2,939.3	4,871.0	–
n5000-k50	167.5	55.5	1,924.0	2,750.3	4,570.2	–
n500-k10	2.7	0.8	7.3	2.8	3,613.8	1,239.7
n500-k100	231.2	4.3	40.3	3.2	3,619.9	461.7
n500-k2	0.1	0.1	54.5	3.5	3,638.6	6.2
n500-k20	25.2	12.7	–	4.4	3,622.3	303.5
n500-k5	0.2	0.2	12.4	3.5	3,621.5	1,076.1
n500-k50	121.2	5.5	13.1	4.6	3,615.3	325.3
Sum	4,771.9	823.4	45,456.7*	18,711.7	95,295.8	60,599.0*

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

Table W89: Average running times (in seconds) of the PCCC and the PCCC-N2-S algorithms for the constraint sets of size 20% CS. 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 3,600 seconds.