Datasets

We provide the information of the datasets used in the experiment below.

Dataset	Nodes	Hyperedges	$\mathbf{avg}_{e\in E}\|e\|$	$\mathbf{max}_{e\in E}\|e\|$	Density	Overlapness
EEN	143	10,883	2.47	37	76.12	188.21
EEU	998	234,760	2.39	40	234.09	559.80
SB	294	29,157	7.96	99	99.17	789.62
HB	1,494	60,987	20.47	399	40.82	835.79
WAL	88,860	69,906	6.59	25	0.79	5.81
TRI	172,738	233,202	3.12	85	1.35	4.21
AM	55,700	105,655	8.12	555	1.90	15.41
YP	25,252	25,656	18.2	649	1.02	18.50
TW	81,305	70,097	25.2	1205	0.86	21.75
COH	1,014,734	1,812,511	1.32	925	1.75	2.32
COG	1,256,385	1,590,335	2.80	284	1.26	3.53
COD	1,924,991	3,700,067	2.79	280	1.92	5.35
THU	125,602	192,947	1.80	14	1.54	2.76
THM	176,445	719,792	2.24	21	4.08	9.13
THS	2,675,955	11,305,343	2.23	67	4.22	9.56
ML1	3,533	6,038	95.3	1435	1.71	162.83
ML10	10,472	69,816	84.3	3375	6.67	562.02
ML20	22,884	138,362	88.1	4168	6.05	532.93

We provide one example data with matrix W, R saved in “sample_w.txt”, “sample_r.txt” each.

W : hyperedge-weight matrix ($|V| \times |E|$)

Each line of sample_w.txt represents a nonzero entry of W, in format i, j, k

i : node index

j : hyperedge index

k : hyperedge weight (i.e., $W_{ij} = \omega(j) = k$)

R : node-weight matrix ($|E| \times |V|$)

Each line of sample_r.txt represents a nonzero entry of R, in format i, j, k

i : hyperedge index

j : node index

k : edge-dependent node weight (i.e., $R_{ij} = \gamma_i(j) = k$)