

Student interactions on Facebook and in reality

A. Gajduk and L. Kocarev, *Fellow, IEEE*

bms	Diameter	# edges	Reciprocity	# Edges in GC	# Nodes in GC	Avg. degree	Assortativity	Avg. path length	# nodes
strong real	14	717	0.59	630	122	4.22	0.43	4.63	170
weak real	9	823	0.25	693	135	4.84	0.03	3.86	170
real	7	1528	0.58	1402	150	8.99	0.24	2.99	170
strong facebook	14	451	0.62	319	87	2.65	0.25	5.20	170
weak facebook	9	845	0.31	742	138	4.97	0.17	3.78	170
facebook	7	1286	0.56	1192	150	7.56	0.26	3.25	170
aggregated	7	1600	0.60	1487	153	9.41	0.19	2.94	170

Fig. 1. Basic global graph statistics for BMS

wan	Diameter	# edges	Reciprocity	# Edges in GC	# Nodes in GC	Avg. degree	Assortativity	Avg. path length	# nodes
strong real	9	582	0.42	390	64	3.88	0.33	3.34	150
weak real	5	918	0.09	420	57	6.12	0.30	2.70	150
real	5	1492	0.32	892	71	9.95	0.38	2.28	150
strong facebook	12	319	0.45	188	49	2.13	0.29	4.47	150
weak facebook	7	775	0.13	414	62	5.17	0.39	2.92	150
facebook	5	1090	0.31	651	68	7.27	0.42	2.54	150
aggregated	5	1610	0.34	985	73	10.73	0.41	2.24	150

Fig. 2. Basic global graph statistics for WAN

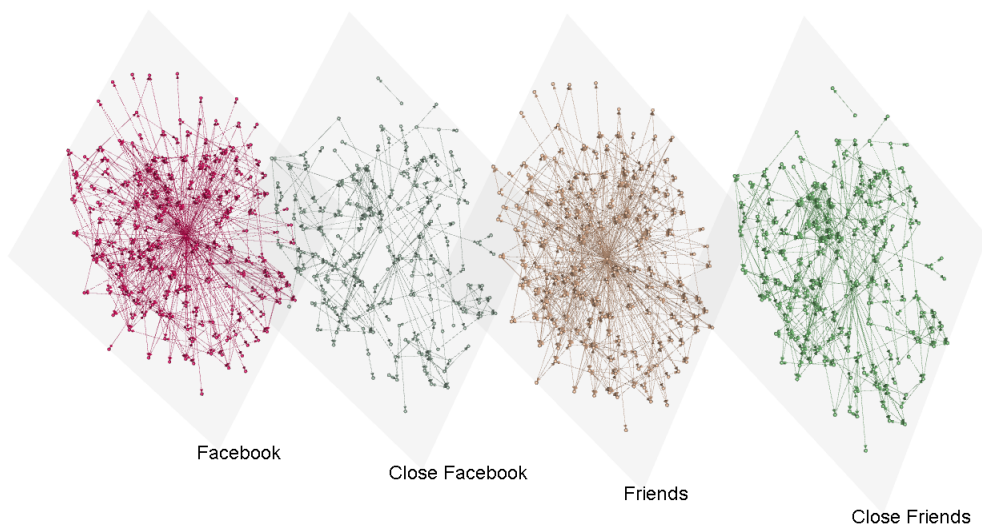


Fig. 3. Multilayer 3D visualization of BMS graphs in MuxViz

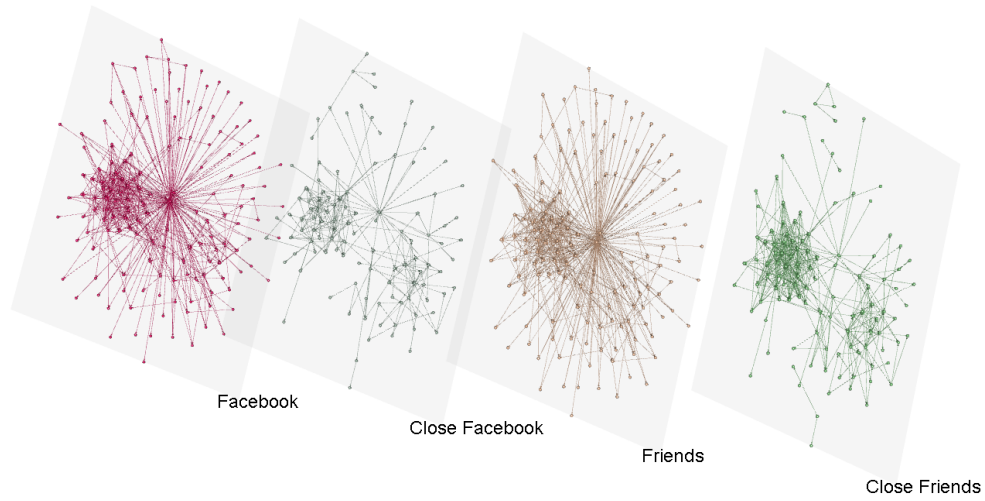


Fig. 4. Multilayer 3D visualization of WAN graphs in MuxViz

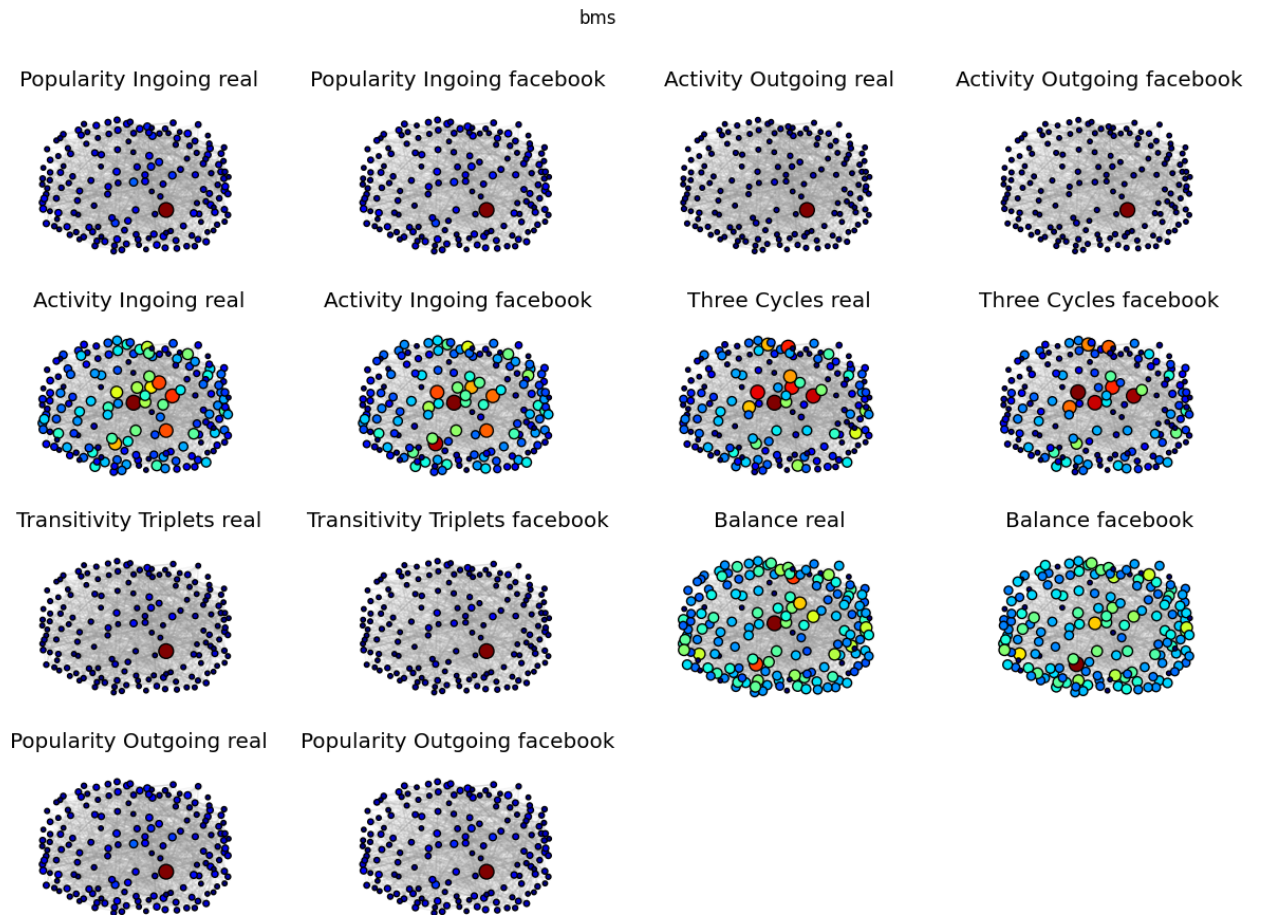


Fig. 5. Real and facebook node metrics visualization for BMS

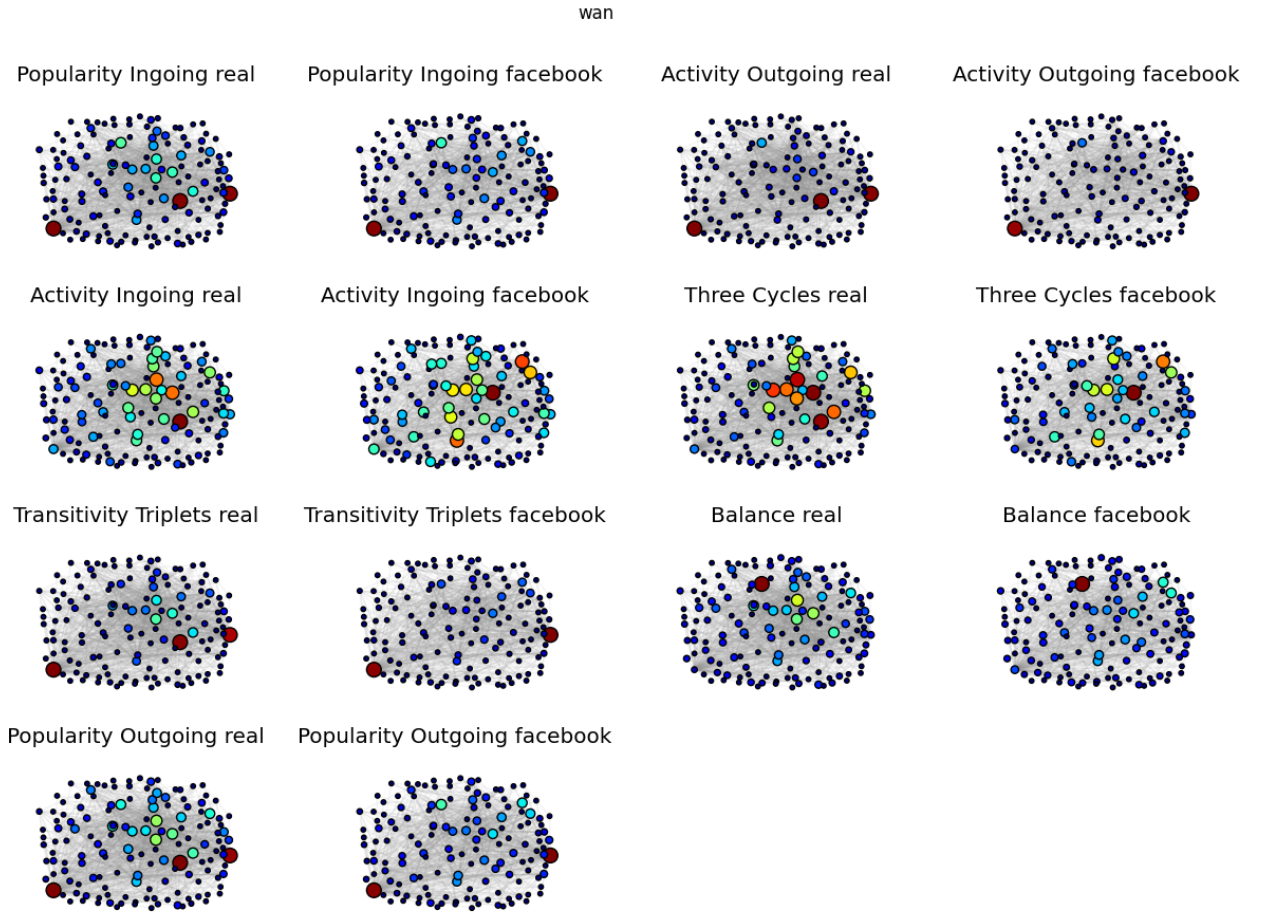


Fig. 6. Real and facebook node metrics visualization for WAN

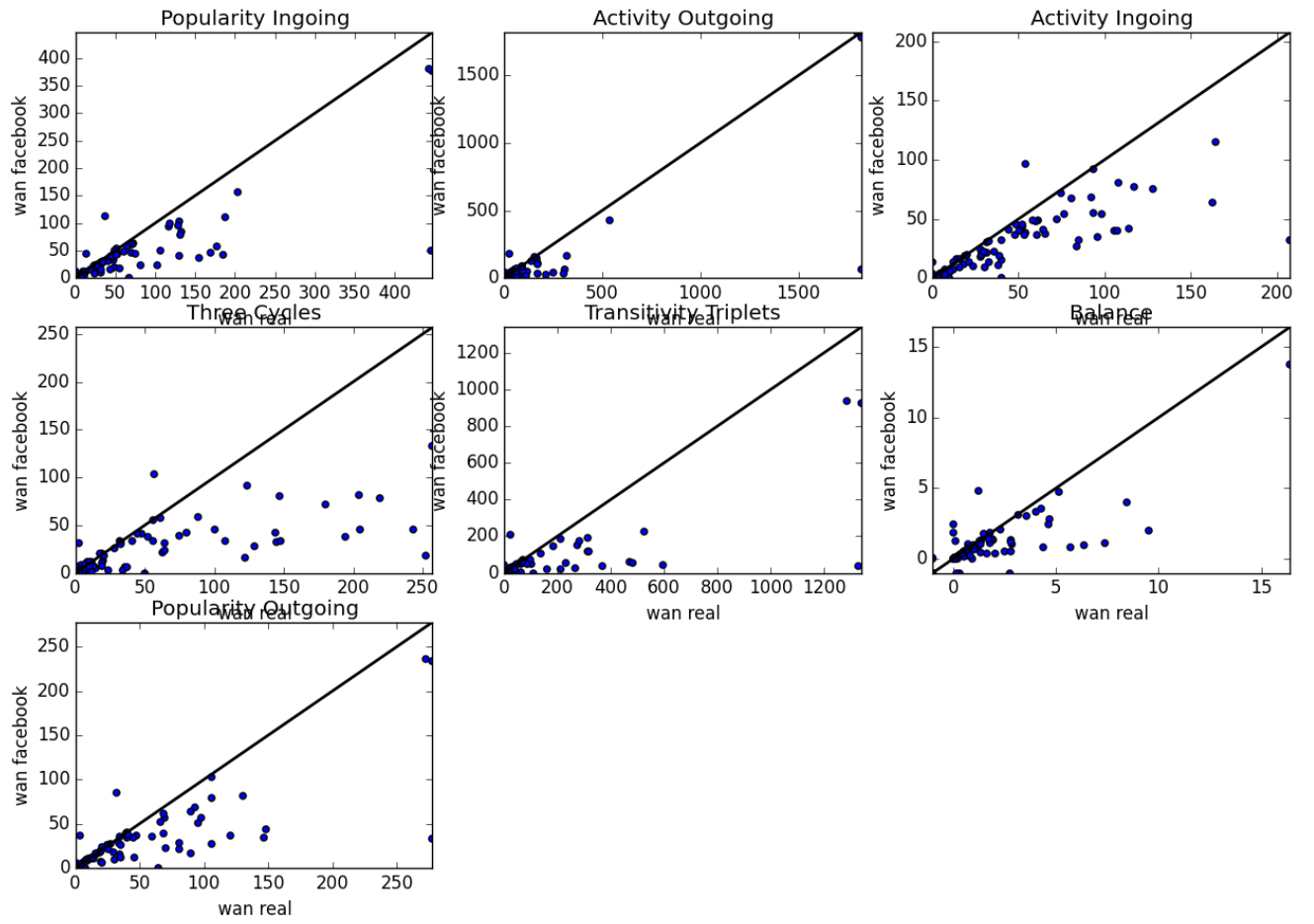


Fig. 7. Comparison of node metrics on real VS facebook WAN

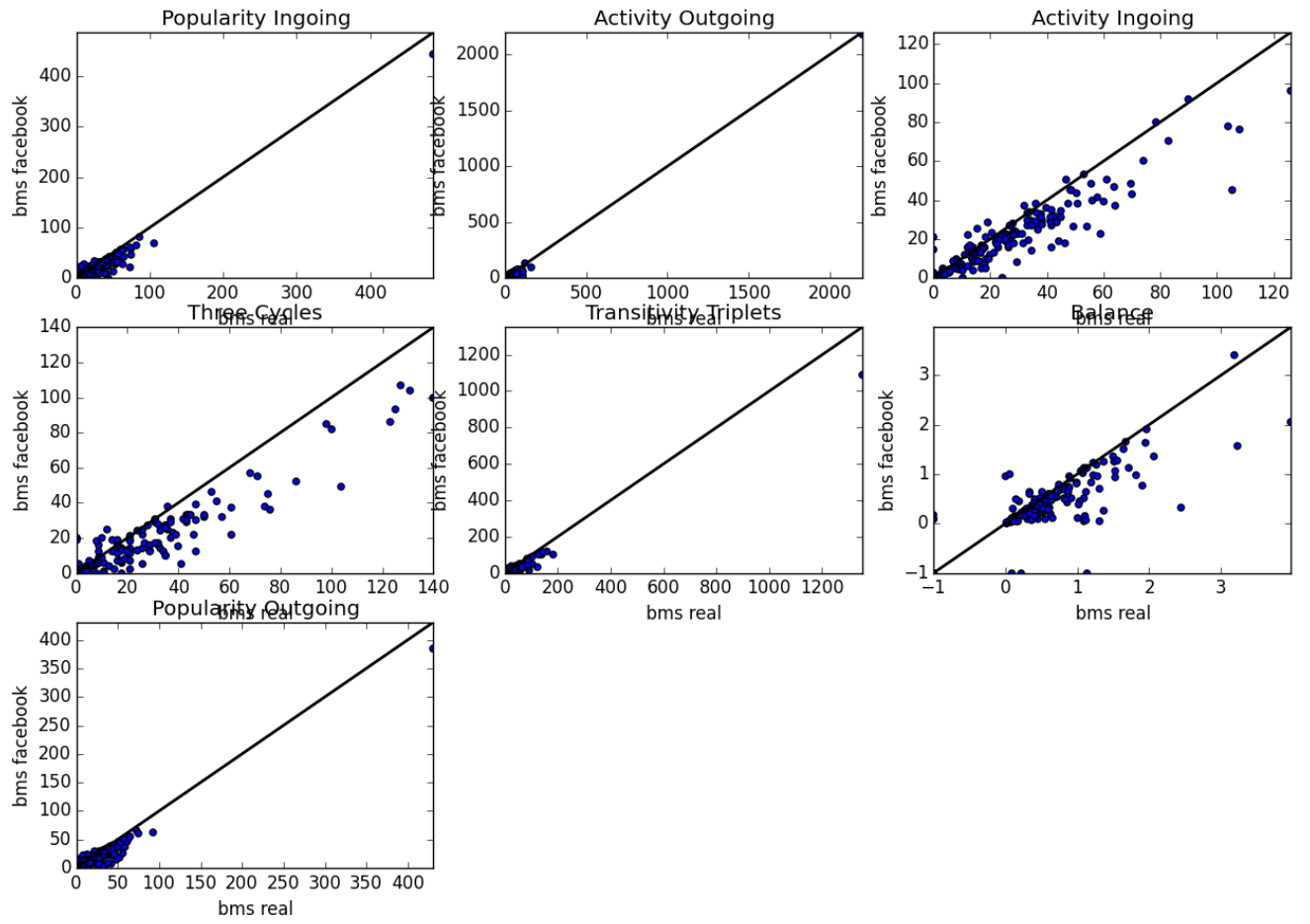


Fig. 8. Comparison of node metrics on real VS facebook BMS