

LAA Numerical Experiments

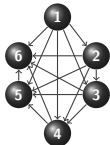
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November 4, 2019

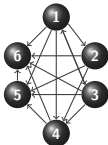
SpecR vs EdgeR

Complete dominance



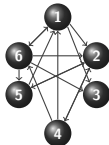
specR = 1.0000
edgeR = 1.0000

Perturbed Dominance



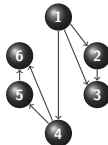
specR = 0.9382
edgeR = 0.9994

Perturbed Random C



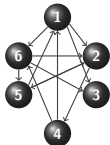
specR = 0.8202
edgeR = 0.9987

Nearly Disconnected



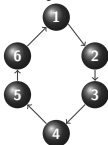
specR = 0.6000
edgeR = 0.9926

Random



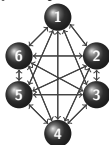
specR = 0.5891
edgeR = 0.9900

Cycle



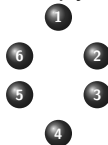
specR = 0.3000
edgeR = 0.9939

Completely Connected



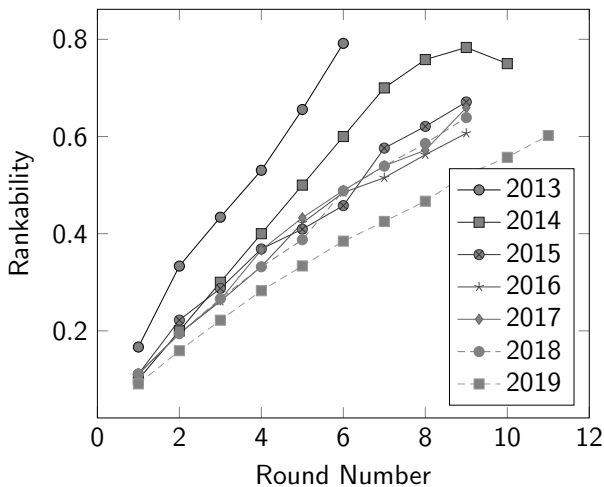
specR = 0.2000
edgeR = 0.0000

Empty



specR = 0.0000
edgeR = 0.0000.

Sinquefield Cup



Elo Rating Correlation

For $i \geq 1$, let e_i denote the Elo rating after round i .

For $i > 1$, define the i th round Elo rating correlation by

$$x_i = \text{spearmanr}(e_i, e_{i-1}).$$

We define the years Elo rating correlation by the weighted average

$$\frac{\sum_{i=1}^n i x_i}{\sum_{i=1}^n i}.$$

SinquefieldCup Elo Rating Correlation

Year	Rankability	Elo Rating Correlation
2013	0.7917	0.9600
2014	0.7500	0.9263
2015	0.6711	0.8537
2016	0.6067	0.8205
2017	0.6593	0.8675
2018	0.6389	0.9253
2019	0.6021	0.7875

Spearman correlation between Rankability and Elo Rating
Correlation is 0.86.

Big East Elo Rating Correlation

Year	Rankability	Elo Rating Correlation
1995	0.8571	0.9253
1996	0.8571	0.9477
1997	0.8149	0.8487
1998	0.8169	0.8835
1999	0.8571	0.8945
2000	0.8571	0.9183
2001	0.8571	0.9397
2002	0.8571	0.9525
2003	0.8571	0.9075
2004	0.6615	0.8077
2005	0.8375	0.9070
2006	0.8049	0.9218
2007	0.6841	0.7985
2008	0.8049	0.8803
2009	0.8571	0.9392
2010	0.7082	0.8434
2011	0.7143	0.7312
2012	0.7143	0.8874

Spearman correlation between Rankability and Elo Rating
Correlation is 0.89.

Mountain West Elo Rating Correlation

Year	Rankability	Elo Rating Correlation
1999	0.7078	0.8736
2000	0.8371	0.7269
2001	0.8571	0.9522
2002	0.8200	0.9192
2003	0.7489	0.8168
2004	0.8377	0.8842
2005	0.8450	0.8441
2006	0.8640	0.9129
2007	0.8750	0.9360
2008	0.8750	0.9538
2009	1.0000	0.9669
2010	0.8750	0.9320
2011	0.8571	0.9201

Spearman correlation between Rankability and Elo Rating Correlation is 0.80.