

random multigraph models: goodness of fit

gof measures between observed and expected edge multiplicity sequence
under simple or composite hypothesis

test statistics:

- ☑ S of Pearson type
- ☑ A of information divergence type

significance level
 $\alpha = 0.05$

summary:

- ☑ even for very small m , the null distributions of the test statistics under the IEA model are well approximated by their asymptotic distributions
- ☑ the convergence of the cdf's of test statistics are rapid and depend on parameters in models
- ☑ approximations can be obtained using adjustments of χ^2 -distributions yielding better power
- ☑ influence of RSM on both test statistics is substantial for small m : a shift of their distributions towards smaller values compared to what holds true for null distributions under IEA

example: number of loops

~IEAS model
number of loops

