

Abstract Submitted
for the MAR08 Meeting of
The American Physical Society

Chinese Mainland Movie Network¹ AI-FEN LIU, YU-HUA XUE, DAREN HE, Ynaghzou University — We propose describing a large kind of cooperation-competition networks by bipartite graphs and their unipartite projections. In the graphs the topological structure describe the cooperation-competition configuration of the basic elements, and the vertex weight describe their different roles in cooperation or results of competition. This complex network description may be helpful for finding and understanding common properties of cooperation-competition systems. In order to show an example, we performed an empirical investigation on the movie cooperation-competition network within recent 80 years in the Chinese mainland. In the net the movies are defined as nodes, and two nodes are connected by a link if a common main movie actor performs in them. The edge represents the competition relationship between two movies for more audience among a special audience colony. We obtained the statistical properties, such as the degree distribution, act degree distribution, act size distribution, and distribution of the total node weight, and explored the influence factors of Chinese mainland movie competition intensity.

¹supported by Chinese National Natural Science Foundation, No. 10635040 and 70671089

Da-Ren He
Ynaghzou University

Date submitted: 24 Nov 2007

Electronic form version 1.4