

Abstract Submitted
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A network description on fruit nutritive factor system¹ YAN-QING QU, YU-MEI JIANG, DA-REN HE, Yangzhou University — We propose describing a kind of cooperation-competition systems by node-weighted bipartite graphs. In the systems the nodes can be divided into two types. One type expresses a kind of activities, organizations or events, named “acts”; the other expresses the “actors” participating the acts. In each act the actors basically show collaboration relationship, however they play different role in the cooperation. This is a kind of competition. The node weight usually signify the role or “importance degree” of each actor. We propose using some statistical properties for the description of such kind of systems. The properties without considering node-weight can describe the cooperation situation and configuration. The properties with node-weight considered may describe the competition results. We report an example system, the fruit nutritive factor network, to show the description method and the corresponding empirical investigation results. It is our wish that the description method could be widely effective for the kind of systems in variety different scientific fields.

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