## Abstract Submitted for the MAR05 Meeting of The American Physical Society

An investigation on Chinese actor-collaboration network<sup>1</sup> ZHI-QIANG GONG, YU-MEI JIANG, Yangzhou University — Chinese actor collaboration network has been investigated by counting 5026 Chinese films and 9601 actors between 1905 and 2000. The network can be described by a biparticle graph. A kind of particles represent actors, the other kind represents films (acts). Two actors are linked by an edge if they have performed in a same film. Our statistical results show that the Chinese actor-collaboration network is a small world one. The average shortest-path length is 4.10 and the clustering coefficient is 0.80. It is very interesting that the results also show that the distribution of the multiple edge degree shows a better scaling-free property than the distribution of the single node degree.

<sup>1</sup>supported by Chinese National Natural Science Foundation, No. 70371071

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Date submitted: 15 Nov 2004 Electronic form version 1.4