國 立 東 華 大 學 應 用 數 學 系
專 題 演 講

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　　　　交通大學生物資訊及系統生物研究所

講　　題：Networking stock market

時　　間：101 年 2 月 24 日(星期五)　15:10-16:50

地　　點：理學院A324會議室

摘　　要

　　This paper studies the structure of the stock market from the viewpoint of network. The market network can be easily constructed by digitizing pairwise correlations. While the number of stocks becomes very large, the network gets close to a Markov random graph and the sufficient statistics are the numbers of edges, stars and triangles. Thus the transitivity of the market network is a natural candidate for measuring the collective correlation of the stock market. With a sample of S&P 500 components in the period from January 1996 to August 2009, we show that transitivity can be used as alternative risk measure in addition to volatility. Furthermore, investigations on higher order statistics reveals the distinctions on clustering effect between bear markets and bull markets.

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