學 術 演 講

講　題：State Transformation on Time Series and Its Methematical Model

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時　間：2024年2月19日(星期一)，10:30-12:00

地　點：統計所B1演講廳

Abstract

We propose a new transform of time series from the values to states and this transformation can do the pre-characterization for the time series. Through this transformation, it is easy to distinct the white noise and random walk on time domain. This state transformation uses the successive values and the equillibrium value to define a state. Since there are three values, we can define six states from the permutation of these three values. Furthermore, we employ a non-linear first order differential equation model to probe the convergence rate of time series. This approach could provide the more information for the time series. However, this ordinary differential equation is first order, but it is non-linear. There is a bifurcation solution. A numerical simulation should be used to solve the ordinary differential equation under general situations. In the reality, we apply our proposed method on the five index markets and the atmospheric pressure, temperature, humidity of the weather of Taiwan.

※ 茶 會：**10：10開始**。
※ 實體與線上視訊同步進行。