

论文

下三角双线性时间序列模型的近似三阶矩结构和双谱密度

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摘要:

下三角双线性时间序列模型,特别是它的一些简单的特殊情况,被许多人研究过。但对于一般形式,目前,只知道其二阶结构(自协方差和谱)与线性 ARMA 模型相似。而反映该模型特征的三阶结构(三阶矩和双谱),由于既繁琐又复杂而很难获得(文献中尚未见报道)。该文给出一种计算三阶矩和双谱的近似方法。特别地,对于可分离的下三角双线性时间序列模型,得到了比较简洁实用的计算公式。

关键词: 双线性 自协方差 三阶矩;谱密度 双谱密度

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The Approximate Third order Moments and Bispectral Density of LTBL Model

Abstract:

Lower triangular bilinear time series, including its special cases, has been studied by several workers. According to the second order structure (i.e., auto variance and spectral density), it is similar to an ARMA model. But the third order structure (the third order moments and bi spectral density), which characterizes the model, is rather complicated and tedious and the authors have not seen the related results in literature. In this context, both the approximate third order moments and bi spectral density have been obtained. In particular, for the separable lower triangular bilinear time series model, the corresponding results have been significantly simplified.

Keywords: Bilinear Auto covariance The third order moments Spectral density Bispectral density

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