

Autocovariance Function of the Fractionally Integrated Separable Spatial ARMA (FISSARMA) models

ABSTRACT

Spatial modeling is important in many fields and there are various kinds of spatial models. One of such models is known as the fractionally integrated separable spatial ARMA (FISSARMA) model. In the area of time series analysis, Sowell (1992). Sowell, F. (1992). Maximum likelihood estimation of stationary univariate fractionally integrated time series models. *J. Econ.* 53:165–188.[CrossRef], [Web of Science ®]View all references) has established the autocovariance function of the long-memory models using hypergeometric function. In this paper we will extend Sowell's work for FISSARMA models.

Keyword: Autocovariance function; FISSARMA models; Fractionally integrated models; Long-memory models; Spatial series; Time series