

Fractionally Integrated Moving Average Processes with Long-Range Dependence: Estimation and Asymptotic Properties

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Abstract. We construct a moving average stochastic process, whose kernel coincides with the one derived from the Generalized Ornstein-Uhlenbeck Type Process (GOUT), but considering the noise process as a fractional Brownian motion process. From the Riemann-Liouville fractional integrals theory, we propose a fractionally integrated moving average process, for which we highlight some results, prove its long-range dependence property, present an estimator for the long-range dependence parameter and show its asymptotic properties.