

Bayesian Analysis for the Long-memory of a Gamma-modulated Process

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Abstract

In this work, we propose a Bayesian methodology to make inferences for a class of Gamma processes, the trajectories of which exhibit long memory behavior and heteroscedasticity. Its path properties are used to implement an approximate Bayesian computation and MCMC scheme to obtain posterior estimates. We test our method with data from the big earthquake occurred in 2010 in Chile. This is a joint work with Plinio Andrade, Soledad Torres and Francisco Torres-Avilés.