

# **Advances in Statistical Computing For Linear Time Series**

by

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## **ABSTRACT**

New algorithms for use with various linear models are discussed.  
Specifically:

- a new family of subset AR models with associated model selection, estimation and diagnostic checking
- a faster algorithm for ARMA maximum likelihood which only requires  $O(1)$  flops per likelihood evaluation
- a comprehensive approach suitable for many types of linear models for exact MLE, forecasting and simulation
- a new algorithm for exact MLE for fractionally differenced or fractionally seasonally-differenced ARIMA models

All methods discussed have been implemented in a series of R packages available from CRAN.