Abstract

In this paper, an attempt to model the temporal variability of rainfall is made by performing a time series analysis on the monthly rainfall data of Jorhat from 1994 to 2013 (excluding 2003). The monthly rainfall time series showed seasonality with a prominent frequency of 0.083 cycles per year. A curve fitting technique by nonlinear regression on the original rainfall time series and on the resulting regular residuals of the subsequent fits is performed to model the seasonality of the rainfall. The selected model is capable of showing the same seasonality and frequency of rainfall variability as that of the original rainfall time series. The selected model has the potentiality to be replicated to model rainfall in places showing similar seasonality as that of the present case.

References


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**Index Terms**

Computer Science

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**Keywords**

monthly rainfall, time series, seasonality, curve fitting, nonlinear regression, Jorhat.