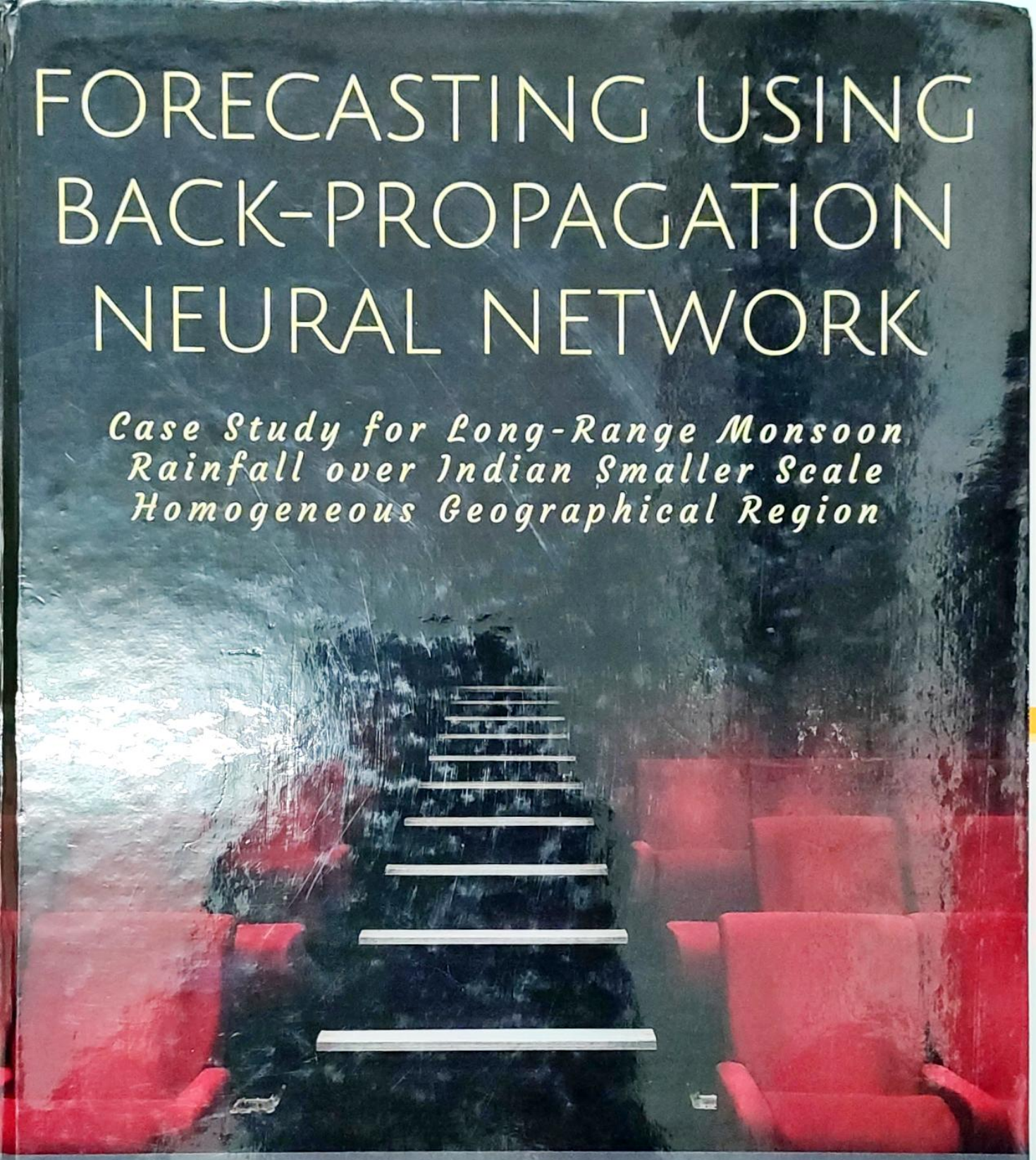
FORECASTING USING BACK-PROPAGATION NEURAL NETWORK

Case Study for Long-Range Monsoon Rainfall over Indian Smaller Scale Homogeneous Geographical Region



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Contents

Forecasting of long range meteorological data time series especially monsoon rainfall becomes a challenging operational task for world's scientists and meteorologists. To forecast, identification of the internal variability of the chaotic nature of meteorological data time series becomes a demanding subject because its chaotic behavior is almost unpredictable. It is found that statistical models are unsuccessful remarkably in case of forecasting of chaotic motion. It has been also observed that, statistical models are not sufficient enough to identify the internal dynamics of highly non-linear chaotic data time series.

The subject material of this book is to represent approaches of Back-propagation neural network (BPN) based modeling of rainfall for forecasting. Three approaches i.e.,
BPN in time series forecast.
BPN in Parametric forecast.
BPN Principal Component Parametric forecast.
in terms of their applied datasets, modeling, training and performances at training and testing period are presented.

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