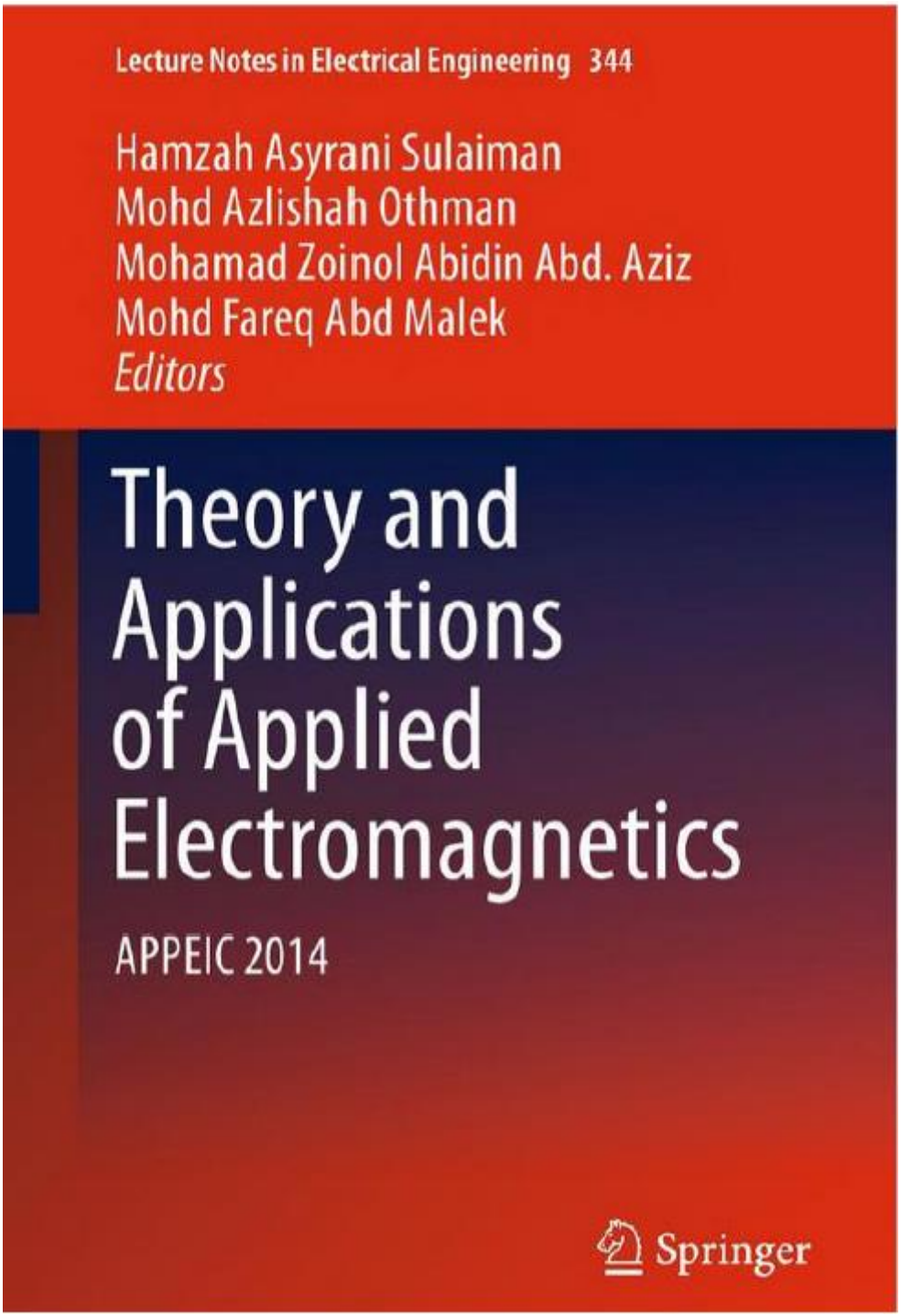

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Contents

Classification of Precipitation Types Detected in Malaysia

Khairayu Badron, Ahmad Fadzil Ismail, Aniliza Asnawi, Mimi Aminah Wan Nordin, A.H.M. Zahirul Alam and Sheroz Khan

Abstract The occurrences of precipitation, also commonly known as rain, in the form of "convective" and "stratiform" have been identified to exist worldwide. In this study, radar return echo or known as reflectivity have been exploited in the process of classifying the type of rain endured. The Malaysian meteorology radar data is used in this investigation. It is possible to discriminate the types of rain experienced in such tropical environment by observing the vertical characteristics of the rain structure. Heavy rain in tropical region profoundly affect microwave and milimetre wave signals, causing interference on transmission and signal fading. Required fade margin for wireless system largely depends on the type of rain. Information relating to the two most prevalent types of rain are critical for the system engineers and researchers in their endeavour to improve the reliability of communication links. This paper highlights the quantification of percentage occurrences over 1 year period of 2009.

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