

Normality of daily temperature is often presumed in climatology. This study aims to verify the adequacy of such a model and possibly design a better one. A set of 20th century temperature data from all parts of Europe is examined. An effort is made to find out, whether regional differences in temperature distribution exist. Chapter 2 describes the preliminary transformation of the data. In Chapter 3, several normality tests are conducted, based on both higher order statistical moments and EDF goodness-of-fit. Chapter 4 introduces finite normal mixtures, Engelman–Hartigan test and an iterative EM algorithm are applied. Chapter 5 summarizes the results.