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-- 1. DATA AND METHOD OF EXPLORATION -- 2. PRINCIPAL RESULTS OF RESEARCH -- CONCLUSION -- REFERENCES -- Chapter 8. ESTIMATES OF VARIANCES IN TIME SERIES STATISTICS -- 1. MODIFIED EMPIRICAL VARIANCE -- 2. VARIATION OF DEVIATION FROM POLYNOMIAL REGRESSION FUNCTION -- 3. MODIFIED EMPIRICAL COVARIANCE -- REFERENCES -- INDEX -- Blank Page.

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## Sommario/riassunto

This new book presents works on processing time series of observations in problems of meteorology, ichthyology, medical geography, epidemiology and demography. These works have been published by the authors within the last 4 years in the Russian journals and reported at various Russian and international conferences. The basic methods of processing of time series in the collected works are developed algorithms for: \*recognition of images, \*classifications, \*estimations of dispersions of fluctuations concerning a trend. The idea of construction of the first two algorithms consists in studying large outliers in time series. Such approach has allowed to construct quite simple for understanding and rather fast, as to computing, algorithms of recognition of images and classifications and to apply them in the problems that are characterized by large volumes of empirical information. The third of the specified algorithms is based on special transformations of time series to problems with a small trend and greater fluctuations. Application of traditional algorithms in the considered arrays of the empirical information demands complex calculations. The problems described in presented works, are actual and that's why the using in them of the offered algorithms carries not illustrative, but substantial character. The problems in question: \*influence of meteorological factors on critical values: catch of fish (hunchback salmon) in the Amur river, freezing in the Tatar strait, numbers infected by tick-borne [ vernal ] encephalitis and other epidemic diseases in Primorye Territory, \*influence of economic transformations on various age groups of the population and on dynamics of a population in cities of the Primorye Territory, \*influence of global warming on fluctuations of surface temperature in various areas of the Far East.

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