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	Transformations; 6.8 Periodogram of a Noise Series; 6.9 Fisher's Test for Periodicity; Appendix; 7 Complex Demodulation; 7.1 Introduction 7.2 Smoothing: Linear Filtering7.3 Designing a Filter; 7.4 Least Squares Filter Design; 7.5 Demodulating the Sunspot Series; 7.6 Complex Time Series; 7.7 Sunspots: The Complex Series; Appendix; 8 The Spectrum; 8.1 Periodogram Analysis of Wheat Prices; 8.2 Analysis of Segments of a Series; 8.3 Smoothing the Periodogram; 8.4 Autocovariances and Spectrum Estimates; 8.5 Alternative Representations; 8.6 Choice of a Spectral Window; 8.7 Examples of Smoothing the Periodogram; 8.8 Reroughing the Spectrum; Appendix; 9 Some Stationary Time Series Theory; 9.1 Stationary Time Series 9.2 Continuous Spectra9.3 Time Averaging and Ensemble Averaging; 9.4 Periodogram and Continuous Spectra; 9.5 Approximate Mean and Variance; 9.6 Properties of Spectral Windows; 9.7 Aliasing and the Spectrum; 10 Analysis of Multiple Series; 10.1 Cross Periodogram; 10.2 Estimating the Cross Spectrum; 10.3 Theoretical Cross Spectrum; 10.4 Distribution of the Cross Periodogram; 10.5 Distribution of Estimated Cross Spectra; 10.6 Alignment; Appendix; 11 Further Topics; 11.1 Time Domain Analysis; 11.2 Spatial Series; 11.3 Multiple Series; 11.4 Higher Order Spectra 11.5 Nonquadratic Spectrum Estimates11.6 Incomplete and Irregular Data; References; Author Index; A; B; C; D; E; F; G; H; I; J; K; L; M; N; O; P; Q; R; S; T; U; V; W; Subject Index; A; B; C; D; E; F; G; H; I; J; K; L; M; N; O; P; Q; R; S; T; V; W
Sommario/riassunto	A new, revised edition of a yet unrivaled work on frequency domain analysis Long recognized for his unique focus on frequency domain methods for the analysis of time series data as well as for his applied, easy-to-understand approach, Peter Bloomfield brings his well-known 1976 work thoroughly up to date. With a minimum of mathematics and an engaging, highly rewarding style, Bloomfield provides in-depth discussions of harmonic regression, harmonic analysis, complex demodulation, and spectrum analysis. All methods are clearly illustrated using examples of specific data sets, while ampl