

Wavelets, Vibrations and Scalings

Physicists and mathematicians are intensely studying fractal sets of fractal curves. Mandelbrot advocated modeling of real-life signals by fractal or multifractal functions. One example is fractional Brownian motion, where large-scale behaviour is related to a corresponding infrared divergence. Self-similarities and scaling laws play a key role in this new area. There is a widely accepted belief that wavelet analysis should provide the best available tool to unveil such scaling laws. And orthonormal wavelet bases are the only existing bases which are structurally invariant through dyadic dilations. This book discusses the relevance of wavelet analysis to problems in which self-similarities are important. Among the conclusions drawn are the following: 1) a weak form of self-similarity can be given a simple characterization through size estimates on wavelet coefficients, and 2) Wavelet bases can be tuned in order to provide a sharper characterization of this self-similarity. A pioneer of the wavelet "saga", Meyer gives new and as yet unpublished results throughout the book. It is recommended to scientists wishing to apply wavelet analysis to multifractal signal processing. This book discusses the relevance of wavelet analysis to problems in which self-similarities are important. Among the conclusions drawn are the following: 1) a weak form of self-similarity can be given a simple characterization through size estimates on wavelet coefficients, and 2) Wavelet bases can be tuned in order to provide a sharper characterization of this self-similarity.

51,00 €

47,66 € (zzgl. MwSt.)

Nicht mehr lieferbar
Artikelnummer: 9780821806852

Medium: Buch

ISBN: 978-0-8218-0685-2

Verlag: American Mathematical Society

Erscheinungstermin: 30.11.1997

Sprache(n): Englisch

Auflage: Erscheinungsjahr 1997

Produktform: Gebunden

Gewicht: 473 g

Seiten: 133
