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certain simple signals; 1.4.7. Two applications; 1.4.7.1. Image segmentation; 1.4.7.2. Analysis of TCP traffic; 1.5. Bibliography; Chapter 2. Scale Invariance and Wavelets; 2.1. Introduction; 2.2. Models for scale invariance; 2.2.1. Intuition  
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 3.4.1. Besov spaces and lacunarity 3.4.2. Construction of formalisms; 3.5. Bounds of the spectrum; 3.5.1. Bounds according to the Besov domain; 3.5.2. Bounds deduced from histograms; 3.6. The grand-canonical multifractal formalism; 3.7. Bibliography; Chapter 4. Multifractal Scaling: General Theory and Approach by Wavelets; 4.1. Introduction and summary; 4.2. Singularity exponents; 4.2.1. Holder continuity; 4.2.2. Scaling of wavelet coefficients; 4.2.3. Other scaling exponents; 4.3. Multifractal analysis; 4.3.1. Dimension based spectra; 4.3.2. Grain based spectra  
 4.3.3. Partition function and Legendre spectrum

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Sommario/riassunto

Scaling is a mathematical transformation that enlarges or diminishes objects. The technique is used in a variety of areas, including finance and image processing. This book is organized around the notions of scaling phenomena and scale invariance. The various stochastic models commonly used to describe scaling ? self-similarity, long-range dependence and multi-fractals ? are introduced. These models are compared and related to one another. Next, fractional integration, a mathematical tool closely related to the notion of scale invariance, is discussed, and stochastic processes with prescribed

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