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		Fourier analysis
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	Nota di contenuto	Introduction -- Mathematical Preliminaries -- Signal Representation and Frames -- Continuous Wavelet and Gabor Transforms -- Discrete Wavelet Transform -- Overcomplete Wavelet Transform -- Wavelet Signal Processing -- Object-Oriented Wavelet Analysis with MATLAB 5 -- References -- Index.
	Sommario/riassunto	This unique resource examines the conceptual, computational, and practical aspects of applied signal processing using wavelets. With this book, readers will understand and be able to use the power and utility of new wavelet methods in science and engineering problems and analysis. The text is written in a clear, accessible style avoiding unnecessary abstractions and details. From a computational perspective, wavelet signal processing algorithms are presented and applied to signal compression, noise suppression, and signal identification. Numerical illustrations of these computational techniques are further provided with interactive software (MATLAB code) that is available on the World Wide Web. Topics and Features Continuous wavelet and Gabor transforms Frame-based theory of discretization and reconstruction of analog signals is developed New

and efficient "overcomplete" wavelet transform is introduced and applied Numerical illustrations with an object-oriented computational perspective using the Wavelet Signal Processing Workstation (MATLAB code) available This book is an excellent resource for information and computational tools needed to use wavelets in many types of signal processing problems. Graduates, professionals, and practitioners in engineering, computer science, geophysics, and applied mathematics will benefit from using the book and software tools. The present, softcover reprint is designed to make this classic textbook available to a wider audience. A self-contained text that is theoretically rigorous while maintaining contact with interesting applications. A particularly noteworthy topic…is a class of 'overcomplete wavelets'. These functions are not orthonormal and they lead to many useful results. — Journal of Mathematical Psychology.