

The method of wavelet transforms is one key tool in signal processing and control. Modern wavelet theory defines outlines for construction of wavelets and transformations using them. It gives rules that one has to obey to get a wavelet basis with desired properties, meaning that everyone can create a wavelet adequate for the given task. An oscillatory property and multiresolution nature of wavelets recommends them for use both in signal processing and in solving complex mathematical models of real world phenomena.

This book brings to engineers and other practitioners help in understanding how wavelets work in order to be able to create new or modify the existing wavelets according to their needs and tries to satisfy different user groups. It is self contained and no previous knowledge is assumed.

In seven chapters, the book gives a concise understanding of the theory of wavelets, explains how to compute them in practise and finally presents typical applications of wavelets and how they work. The book is written for graduate students and practising Engineers of electrical communications, signal processing and control.