

Learning to swim in a sea of wavelets

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Abstract

We give some introductory notes about wavelets, motivating and deriving the basic relations that are used in this context. These notes should be considered as an introduction to the literature. They are far from complete but we hope it can motivate some readers to get involved with a quite interesting piece of mathematics which is the result of a lucky marriage between the results of the signal processing community and results in multiresolution analysis. We try to give answers to the questions: What are wavelets? What is their relation to Fourier analysis? Where do the scaling function and the wavelet function come from? Why can they be useful? What is a wavelet transform? Where and how are they applied?

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