

Multiresolution Analysis in Terms of Intuitionist Mathematics

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Abstract: Multiresolution analysis, which is a concept that has stemmed from optics, refers to a specific construction in the Hilbert space in order to produce orthogonal wavelets [1]. A generalization to biorthogonal or frame wavelets also applies. The construction is based upon a scale self-similarity which gives rise to a cascade family of approximation subspaces. It is computationally attractive in terms of intuitionist mathematics that considers the time continuum to be a primordial intuition of consciousness [2]. The time operator of wavelets should decompose the Hilbert space into detail subspaces at successive scales, which are wandering by a bilateral shift. A significant link to the measurement problem provides a statistical model that has been proven tremendously useful in a variety of applications [3].

Keywords: wavelets, time operator, intuitionism, measurement problem.

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