



**THE N -DIMENSIONAL UNIFORM CONTINUITY
OF THE ABSTRACT WAVELET TRANSFORM**

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Abstract

Given $n + 1$ abstract locally compact topological groups A_1, A_2, \dots, A_n and B , where A_i are Abelian, the abstract wavelet transform for a function $f \in L^2\left(\prod_{i=1}^n A_i\right)$ with respect to an admissible function $h \in L^2\left(\prod_{i=1}^n A_i\right)$ is defined so that the left and right uniform continuity of the wavelet transform holds because of the left and right uniform continuity of f .

Keywords and phrases: left and right uniform continuity, admissible function, abstract wavelet transform, inversion formula, convolution.

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