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Hankel type transform on a Gevrey type space

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Abstract:

In this paper we give a completion for the distributional theory of Hankel type transformation developed in [6] and [8]. The space H_w generalizing the Altenburg space H is defined. Some properties of this space are studied. It is shown that the Hankel type transformation $h_{\alpha,\beta}$ is an automorphism of H_w. The generalized Hankel type transform of Gevrey spaces is defined and it is found that Hankel transform is an automorphism of H'_w. Product on H_w, Hankel type translation and Hankel type convolution on H_w are investigated.

KEY WORDS:

Hankel type transform,

Hankel type translation,

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Gevrey spaces..

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