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The Mehler formula for the generalized Clifford-Hermite polynomials

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Abstract The Mehler formula for the Hermite polynomials allows for an integral representation of the one-dimensional Fractional Fourier transform. In this paper, we introduce a multi-dimensional Fractional Fourier transform in the framework of Clifford analysis. By showing that it coincides with the classical tensorial approach we are able to prove Mehler's formula for the generalized Clifford-Hermite polynomials of Clifford analysis.

Key words [Clifford analysis](#) [Fractional Fourier transform](#) [Hermite polynomials](#)

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