

On Fourier transforms of continuous q -Hermite polynomials of Rogers

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An overview of the remarkably simple transformation properties of the continuous q -Hermite polynomials $H_n(x|q)$ of Rogers with respect to the classical Fourier *integral* transform is presented. The behavior of the q -Hermite polynomials under the *finite* Fourier transform and an explicit form of the q -extended eigenvectors of the *finite* Fourier transform, defined in terms of these q -polynomials, are also discussed.