

# Computing the Fourier Transform via Homotopy Perturbation Method

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In this paper, the homotopy perturbation method (HPM) is applied to compute the Fourier transform (FT) of functions on  $\mathbb{R}$ . The basic properties of the Fourier transform are again obtained by HPM and examples assuring the applicability of HPM are presented.

*Key words:* Homotopy Perturbation Method; Fourier Transform.