LightTrans' Talk at EOS Topical Meeting on Diffractive Optics 2019

Numerical Implementation of the Homeomorphic Fourier Transform and its Application to Physical-Optics modeling

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Abstract

The authors propose an efficient approach to perform the Fourier transform, which, even though approximated, is quite accurate under certain common conditions in optics: the "homeomorphic Fourier transform (HFT)". We present the theoretical derivation and the numerical implementation. We illustrate its potential with examples.