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EFFECTS OF ATMOSPHERIC TURBULENCE ON HERMITE GAUSSIAN MODES VIA CONVOLUTIONAL NEURAL NETWORKS

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Hermite-Gaussian laser modes are a complete set of solutions to the free-space paraxial wave equation in Cartesian coordinates. They are often referred to as transverse electromagnetic modes and represent a close approximation to physically realizable laser cavity modes. Their applications ranges from enhancing optical communications information capacity to description of optical fields as well as in achieving high resolution imaging in microscopy. This study will propose and implement atmospheric turbulence effects on hermite Gaussian laser modes with orbital angular momentum.

Apply to be considered for a student ; award (Yes / No)?

Yes

Level for award;(Hons, MSc, PhD, N/A)?

PhD

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